

JPRS 77387

13 February 1981

# China Report

ECONOMIC AFFAIRS

No. 117

**FBIS** FOREIGN BROADCAST INFORMATION SERVICE

#### NOTE

JPRS publications contain information primarily from foreign newspapers, periodicals and books, but also from news agency transmissions and broadcasts. Materials from foreign-language sources are translated; those from English-language sources are transcribed or reprinted, with the original phrasing and other characteristics retained.

Headlines, editorial reports, and material enclosed in brackets [ ] are supplied by JPRS. Processing indicators such as [Text] or [Excerpt] in the first line of each item, or following the last line of a brief, indicate how the original information was processed. Where no processing indicator is given, the information was summarized or extracted.

Unfamiliar names rendered phonetically or transliterated are enclosed in parentheses. Words or names preceded by a question mark and enclosed in parentheses were not clear in the original but have been supplied as appropriate in context. Other unattributed parenthetical notes within the body of an item originate with the source. Times within items are as given by source.

The contents of this publication in no way represent the policies, views or attitudes of the U.S. Government.

#### PROCUREMENT OF PUBLICATIONS

JPRS publications may be ordered from the National Technical Information Service, Springfield, Virginia 22161. In ordering, it is recommended that the JPRS number, title, date and author, if applicable, of publication be cited.

Current JPRS publications are announced in Government Reports Announcements issued semi-monthly by the National Technical Information Service, and are listed in the Monthly Catalog of U.S. Government Publications issued by the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402.

Indexes to this report (by keyword, author, personal names, title and series) are available from Bell & Howell, Old Mansfield Road, Wooster, Ohio 44691.

Correspondence pertaining to matters other than procurement may be addressed to Joint Publications Research Service, 1000 North Glebe Road, Arlington, Virginia 22201.

13 February 1981

# CHINA REPORT ECONOMIC AFFAIRS

No. 117

## CONTENTS

### NATIONAL POLICY AND ISSUES

Feudal System Said To Have Hampered Development of Capitalism (Shen Dingping; GUANGMING RIBAO, 6 Jan 81) .....	1
Newspaper Comments on Economic Readjustment (Xu Gang; RENMIN RIBAO, 15 Jan 81) .....	8
'GONGREN RIBAO' on Reasons for Economic Readjustment (WEN WEI PO, 17 Jan 81) .....	12
'GONGREN RIBAO' on Economic Readjustment (TA KUNG PAO, 24 Jan 81) .....	14

### ECONOMIC PLANNING

Circular on Tightening Market Price Control in Hebei Issued (HEBEI RIBAO, 1 Jan 81) .....	16
--	----

### FINANCE AND BANKING

Briefs Heilongjiang Deposit Increase .....	20
---	----

### ENERGY

Formation, Migration of Continental Oil, Gas in China (ZHONGGUO KEXUE, Oct, Nov 80) .....	21
--	----

### MINERAL RESOURCES

Briefs Jilin Prefectural Gold Output .....	41
---	----

## INDUSTRY

Reasons for Poor Sale of Jinan Grease Explored (Lu Huazhong, Liu Xuide; DAZHONG RIBAO, 8 Nov 80) .....	42
---	----

### Briefs

Yunnan Industry, Communications	44
Guizhou Economic Readjustment	44
Zhejiang Telephone Service	44
Nei Monggol Light Industry	44
Shandong Textile Industry	45
Heilongjiang Municipal Industry	45
Heilongjiang Second Light Industry	45
Heilongjiang Municipal Industrial Enterprises	45
Production Records	45
Jiangsu Electronic Computers	45
Zhejiang Industry	45
Tianjin Industrial Production	46
Jiangsu New Company	46
Guangxi Electronics Production	46

## CONSTRUCTION

Shandong Urges Control of Capital Construction Projects (Shandong Provincial Service, 25 Jan 81) .....	47
---	----

Newspaper Comments on Regulating Construction Scale (Wang Zhuo; RENMIN RIBAO, 15 Jan 81) .....	48
---	----

### Briefs

Yunnan Construction Materials	53
Zhejiang Rural Housing	53
Zhejiang Housing Projects	53
Jiangxi Housing	53
Jiangxi Communications	53
Jilin Municipal Housing Projects	53

## DOMESTIC TRADE

### Briefs

Anhui Smuggling	54
Shanghai Black Market	54
Yunnan Price Inspection	54

## FOREIGN TRADE

Work Suspended on Two Petrochemical Plants (KYODO, 30 Jan 81) .....	55
--	----

## LABOR AND WAGES

### Briefs

Zhejiang Business Performance	56
Zhejiang Youth Employment	56
Shanghai Workers' Paid Holidays	56

## TRANSPORTATION

China's CAAC Striving To Improve Airline Service (XINHUA, 15 Jan 81) .....	57
---	----

### Briefs

Sichuan Sunken Ship	58
Zhejiang Passenger Pier	58
Heilongjiang Roads	58
Shanxi Double-Track Railway	58

## GENERAL

'RENMIN RIBAO' Criticizes Advertisement for Exaggeration (XINHUA Domestic Service, 31 Jan 81) .....	59
--	----

### Briefs

Beijing Contraband Seized	61
Shanghai Ration Coupons	61

## NATIONAL POLICY AND ISSUES

### FEUDAL SYSTEM SAID TO HAVE HAMPERED DEVELOPMENT OF CAPITALISM

HK220702 Beijing GUANGMING RIBAO in Chinese 6 Jan 81 p 4

[Article by Shen Dingping [3068 1353 1627]: "Encouraging the Essentials and Restricting the Nonessentials and the Spread of Capitalism"]

[Text] "Encouraging the essentials and restricting the nonessentials" or "encouraging agriculture and restricting commerce" was the guiding philosophy and traditional policy of feudal Chinese society. Its roots were planted in the foundation of the natural economy. If it were said that in the early period of feudal society the policy of encouraging the essentials and restricting the nonessentials had played an important part in the building up and strengthening of the feudal system then it would equally hold that in the final stage of feudal society when capitalist production relationships began to develop and spread, the policy demonstrated fully its reactionary function and became a serious impediment to social progress.

With the development in the production and exchange of commodities during the Jiajing and Wenli eras of the Ming Dynasty, capitalist production relationships had already begun to appear in certain handicrafts in areas south of the lower reaches of the Chang Jiang and along the coast in southwest China. Because these handicraft products were articles of daily use by the populace and because the localities in which capitalism had appeared were the more economically, politically and culturally developed areas in the whole country, the functional role of this new economic factor tended to extend beyond the limits of regional areas and individual handicrafts and affected immensely the economic structure of society as a whole. Thus, it is worthwhile to study how the policy of encouraging the essentials and restricting the nonessentials impeded the spreading and growth of capitalism.

#### I

Following the appearance of capitalism in the middle and final periods of the Ming Dynasty, an outstanding phenomenon was a large exodus of people from the rural villages and a sharp increase in the population in urban areas. At that time, the peasants "would leave the rural villages on the slightest pretext." It was found that in the rural villages south of the lower reaches of the Chang Jiang "roughly 60 to 70 percent of the people gave up farming as the means of their livelihood" ("Si You Zhai Cong Shui," Vol 3) An important destination for these now unemployed peasants who had left lands was to go to the cities and engage in industry and commerce. For example, among the "several hundred thousand households" in Hangzhou Municipality well-known as the "congregation center of a thousand kinds of commodities,"



less than one-half were original inhabitants. Among the remaining portion, outside of a small number of "big merchants" from various localities, the majority consisted of new arrivals who engaged in "periodic and part-time work" and were mostly loafers "living from hand to mouth" ("Collection of Zhang Julai's Works," Vol 66). Some people estimated that the number of such emigrants who had forsaken farming and migrated to big cities was "more than several hundred thousand households" ("Jing Xi Wen Pian" of Ming Dynasty, Vol 313).

This kind of rural to urban population movements reflected the development of capitalism. As Lenin pointed out: "It is unthinkable for capitalism not to have the phenomena of an increase in the industrial and commercial population and a decrease in the agricultural population. Everybody knows that such phenomena are especially noticeable in capitalist states" ("Collected Works of Lenin," Vol 3, p 20). For example, in Suzhou's silk textile industry where the spread of capitalism was particularly noticeable tens of thousands of hired workers had congregated. Their products not only were famous within the country but also enjoyed brisk sales abroad. The growth of Suzhou's silk textile industry promoted the development in the Huzhou region of commercialized farming which had the special features of the planting of mulberry trees and the raising of silkworms. In order to increase the output of mulberry leaves, hired laborers were mostly employed on mulberry farms in the Huzhou region and, as a result, this gave rise to the use of hired labor in agriculture. Because of a large portion of the agricultural and nonagricultural population being engaged in the production of raw silk and silk textiles, areas south of the lower reaches of the Chang Jiang had to make up their grain deficiency by purchasing supplies from the Hunan, Hubei and Guangdong Provinces. Even during the last years of the Ming Dynasty when fighting erupted in different parts of the country, people in Jiangsu and Zhejiang Provinces had to buy grain from the Xiangfan region of Hubei Province. This illustrates how the decrease in rural population and the increase in industrial and commercial population did play an important role in expanding the domestic market and accelerating the growth of the capitalism factor in urban and rural areas.

However, all these changes seriously threatened the existence of the feudal system. The large exodus of rural population deprived the landlords of direct exploitation of the labor force. The growth of the commercial economy also adversely affected the dominating role of the natural economy. For this reason, after the middle period of the Ming Dynasty, the landlord class both inside and outside the official circles strenuously urged the adoption of the traditional policy of "encouraging the essentials and restricting the nonessentials." They were bigotedly attached to ancient ways, oblivious of the changes in historical reality. They believed that only by following the example of ancient times when "peasants comprised 80 to 90 percent of the population" could "there be sufficient food and clothing for the people and could the people be devoid of difficulties and hardships" ("Qian Kun Zheng Qi Ji," Vol 252). They alleged that because of the "small number of people engaging in farming," in the rural villages south of the lower reaches of the Chang Jiang, the peasants became "exalted personages," "lazy and arrogant, refusing to take orders from their masters." They even said that if this trend were allowed to develop unchecked, "the peasants would work half-heartedly in the fields, people would desert their villages and the localities would completely disintegrate" (excerpts from "Si You Zhai Cong Shui," Vol 3). They openly asked for the demolition of industry and commerce and the sending of people to do farming

work. For the sake of safeguarding and prolonging the rule of feudalism, the landlord class wielded their highly concentrated political power to forcefully put into practice the traditional policy of "restricting commerce."

## II

The policy of "restricting commerce" on the part of the feudal rulers was generally demonstrated in two ways: One way could be seen in the promulgation of laws, strictly restricting the merchants' scope of operations. The Ming Dynasty enforced an ancient traditional code which called for government monopoly of salt and tea, commodities which were closely associated with the people's livelihood. The statute imposed harsh penalties on those who sold contraband salt or tea, subjecting them to caning or exile for life to distant places. These kinds of laws which converted civil commerce to official commerce and private enterprises to state enterprises not only kept out a large number of commodities from the normal realm of circulation but also made merchants become serf-like appendages under a state prohibition system. In addition, under feudal laws very severe regulations were enforced in places which merchants and travelers had to pass through, such as customs, hotels, commission agencies and wharves and ports. In order to control effectively these trade centers, the feudal government kept detailed records of the names and number of merchants and ships, the names of carrier agents and firms, the quantity of goods in transport, and the date of the dispatch of goods. The slightest violation of rules would be subjected immediately to prosecution and fines. This knitting together of statutes of an intricate, harsh and all-embracing nature may be likened to an enormous network to catch the merchants for violating these statutes. In this way, commodity economy which ordinarily envisaged enormous possibilities of development was confined to an extremely narrow and restricted realm.

Another way was like draining a pool to catch all the fish and commercial capital was literally plundered at will. First, the feudal rulers would raise taxes collected at customs points and in marketplaces. For example, a levy made in the year of Tian Gu required the six large customshouses in the country to increase their tax revenues by 10,000 to 20,000 taels of silver each. An extra levy imposed on the Nan Guan tax office in Zhejiang Province nearly doubled the amount of the commercial tax by 100 percent. Over the 100 years between the reign of Emperors Zhengde and Chongzhen the tax levy at Beixin Guan in Hangzhou Municipality was increased by 23 times, ("Tianxia Jun Guo Li Ping Shu," Vol 83). Second, a system of inviting merchants to submit tenders to supply provisions and goods or to render certain services was instituted, but actually this was of a compulsory nature. At the time the imperial palaces and government offices frequently asked the merchants to submit tenders on supplying provisions and goods to replenish their stores and to act as agents to collect grain levies in the northern provinces or to collect special military levies in the frontier areas. A long period of time usually elapsed between the merchants delivering the goods or turning in the funds for the levies and the subsequent payment or repayment they received for the goods or tax funds advanced. Even though they ultimately received payment or repayment, very frequently the payments were at a discount and thus the merchants were exploited for the second time. Hence, "while in name the deal was purportedly a business transaction, in actual matter of fact it was outright plunder" ("Jing Gu Wen Pian" of Ming Dynasty, Vol 58). Rich merchants with substantial means not only would "become bankrupt overnight once they submitted the tenders but also might



lose their lives and properties." For this reason, "whenever a year arrived which required the submission of tenders, everyone of those concerned felt like having to go through a life and death ordeal." "Their gloom would literally darken the sky." From this, the cruel nature of the practice of inviting tenders can be imagined.

Furthermore, a multitude of "imperial stores," "official stores," and "official markets" of a more or less commercially monopolistic nature found their way into prosperous business centers. They carried on business as department stores, or as offices to collect rent or business taxes, and generally behaved in a tyrannical manner. They made it difficult for bona-fide merchants to do legitimate business. When the ruling class found that such tyrannical acts could not stop the circulation of commodities or fill their greed, they would resort to open acts of violence and directly and openly plundered and robbed the merchants. The crimes committed in the Wen Li years of the Ming Dynasty by officials in charge of mines or tax offices which made people burn with anger were classical illustrations of atrocious acts of this kind. The great scholar Zhu Geng wrote thus: "In mining, continual extracting and sorting have exhausted all the mining resources, but the practice of contracting out mining jobs persisted, unmindful of the fact that the resources were the people's flesh and blood. Endless taxation has denuded the merchants of their financial resources." After going through these ordeals, both industry and commerce were in a withered and depressed state. For example, in such busy commercial centers as He Xi Mu and Lin Qing, the number of visiting businessmen dropped sharply and the shops suspended business one after another. Likewise, in Suzhou the number of knitting mills became smaller and smaller and as a result the hired workers of these mills were out of work.

At the final stage of the feudal society, merchants and commercial capital had a dual role. On the one hand, they served as the middleman or matchmaker in the exchange of commodities. In this way, they converted products having use value into commodities having exchange value and thereby helped to cause the breakdown of the natural economy. Unfortunately, the perverted and outrageous acts of the feudalist rulers blocked the normal circulation lanes of commodities. This greatly restricted both the conversion of products into commodities available for exchange and the extent of the adoption of the capitalist way of operation in industrial and agricultural production. Thus, not only were industry and commerce restricted in playing their role of class polarization and the breakdown of the natural economy but also hired labor in the rural villages was denuded of its importance in production due to the lack of future development possibilities. On the part of the landlord class, it was found that even by hiring a laborer for a whole year they could barely make ends meet, "without any profit or surplus," or perhaps "with only a little profit." At the same time, the hired laborer must be well-treated with food and wine and must not be reprimanded. Actually, the gain could not make up for the loss, and therefore it was rightly argued that it would be "far better to lease out the land and enjoy a quiet and peaceful life" ("Bu Nong Shu," Vol I, "Lu Yuan Cong Hua," Vol 7). Moreover, in the eyes of the law and in actual living a hired laborer lacked a free social status, being liable at any moment to being downgraded to a slave. Hence, the use of hired laborers in the rural villages never attained normal and full development.

The merciless exploitation of the merchants by the feudal rulers made people leery of engaging in commerce. Consequently, there was an exodus of commercial capital, but it was not put into the development of handicraft production, rather it was used for the acquisition of land. Nor was the capital outflow meant to hamper capitalist production but rather was intended as a retrogressive step of feudalist exploitation. At that time, it was frequent for "wealthy people to rise and fall at any moment," and in the minds of the people the concept that "agriculture was still the best of all" ("Bu Nong Shu," Vol I) still prevailed. Influenced by such social ideas, even the merchants who had made their fortune by chasing after the nonessentials turned to buying land as the final recourse. For example, in Changshu, a rich merchant surnamed Qian made use of the capital from his business which had made him rich to purchase fertile farmland. In his later years, he became well-known for his enormous "storehouses of grain and silver," although actually he was a parasite earning a living without having to work. Similarly, in Nanjin, another merchant by the name of Xu, after having become rich from merchandising, purchased many mu of land and his specialty was to exploit the sweat and blood of the poor farmers. He summarized his lifelong experience with the words that "in the pursuit of a living, start with the nonessentials and having made a fortune preserve it by means of the essentials" ("Chan Yuan Ji," Vol 14). This was a classical illustration of the common practice among merchants. It also reflected the direction of the development and flow of commercial capital.

Basically speaking, the expansion of the domestic market and the development of commerce and trade provided advantageous conditions for the spread of capitalism. But the feudal rulers' policy of "encouraging the essentials and restricting the nonessentials" wrecked from two sides the foundation of capitalist production relations. It compelled a rather sizable portion of commercial capital to be used in land procurement, and thus not available for use in "directly controlling production" wherein it ultimately could be converted into capital for industrial development. At the same time, it impeded the development of the use of the hired labor force in agriculture and of class polarization, and prevented the rural villages from supplying a large number of people to become free workers who owned no land. As a result of these two basic factors which made up the capitalist production relations failed to obtain a sufficient basis for development, the spread of capitalism naturally met with difficulties and could not achieve rapid development.

### III

The disruption of the spread of capitalism led to rather serious consequences. In addition to a decrease in the production of commodities within the country, overseas trade was also seriously affected. After the middle and final periods of the Ming Dynasty, the Spanish used Manila as a transport center and employed large sailing boats plying regularly between Mexico and the Philippines to carry large quantities of Chinese silk goods for sale on the American continent. In return, they carried large quantities of silver back to the Philippines and carried on brisk trade with the Chinese merchants. Between the last years of the Jia Jing of the Ming Dynasty and the first years of the Long Qing of the Qing Dynasty, this type of trade relations between China and the Americas continued without interruption for more than two centuries. These facts indicated that China's production of commodities and Chinese trade formed to a certain extent an important part of the world market of that period. While the European countries vied among

themselves for the possession of Asian products and the rich resources of the American continent, many Chinese products, particularly the large quantities of silk goods, were among the important targets of their pursuit and were the basis for their opening up of colonial markets, carrying out primitive capital accumulation and developing capitalism. However, despite having played a definite part in the expansion and promotion of the world market, China's overseas trade was unable to play a more positive role in the national social economy because of the pressure brought to bear on it by the country's traditional way of thinking and its policy. This pressure was first demonstrated by the prolonged enforcement of the ban on maritime trade by the Ming Dynasty. Because of the fear that intercourse between people along China's coastline and foreign countries might endanger the feudalist rule and badly affected by the traditional closed-door policy, the Ming Dynasty enforced a ban on maritime trade and enacted rather severe statutes to ensure the ban. For example, the statutes prohibited the "building of two-masted large boats for the purpose of carrying prohibited goods for sale to foreign countries." "Principal offenders would be prosecuted as conspiring against the state and be beheaded," while "their family members would be exiled to the frontier areas" (Penal codes of Ming Dynasty, Vol 167). Subsequently, in the first years of Long Qing circumstances forced the Ming Dynasty to relinquish the ban on maritime trade but the policy in effect was still one which "encouraged maritime trade in name but restricted it in fact" ("Jing Xi Wen Pien" of Ming Dynasty, Vol 400). For example, it was stipulated that ships must have a license before embarking on a trip and on return the license must be presented for cancellation. This was meant to effect a tight control on all ships. Ships embarking on a trip abroad were not allowed to carry such prohibited goods as saltpeter, copper and iron. In addition, there were detailed regulations governing the number and tonnages of ships allowed to sail the high sea as well as the time and route of each trip. In addition, customshouses along the coast were authorized to levy heavy taxes on the merchant ships. Take for example the merchant ships of Ha Deng County of Fujin Province. They were required to pay four kinds of taxes, namely, registration tax, maritime tax, inland tax and a surtax. Among them, the surtax alone amounted to 150 taels of silver per ship. This illustrated how heavy the tax charges were. On the surface the ruling landlord class appeared to have adopted now slightly different tactics compared with before but in reality deep in their minds there still prevailed the thought that "among the people in the country, the merchants were of the lowest grade." It was precisely this traditional and conservative thinking and policy that impeded the development of overseas commerce. It stopped, instead of encouraging, the entry of Chinese goods onto the world market and weakened, instead of strengthening, the competitiveness of the Chinese merchants in relations to their foreign counterparts. In this way, the West European countries, supported by the policy of "mercantilism" and taking advantage of the expansion of the world market and the development of overseas trade, effected with great ease the transition of production from the feudalist type to the capitalist type. On the other hand, China's overseas commerce, oppressed by the policy of "encouraging the essentials and restricting the nonessentials," had never been able to hurdle the stumbling block of feudalism and thereby became an important factor in promoting the growth of capitalism.

Indeed, this policy of "encouraging the essentials and restricting the nonessentials" prevented the development of capitalism in China and hindered its historical development. At one time when in Western Europe large amounts of monetary wealth were



concentrated in the hands of industrialists and merchants connected with world trade who converted their money into capital and promoted the capitalist type of production. In the process, the power of the capitalist class grew rapidly while the power of the landlord class declined steadily. On the other hand, a different situation prevailed in China. It was true that the development of world commerce and the sharp increase in the quantity of precious metals in circulation did have some effect on China's social economy after the middle period of the Ming Dynasty. For example silver had become the principal currency in circulation and it was mainly derived from foreign trade by way of the Philippines, but the despotic rule of feudalism and its policy of "encouraging the essentials and restricting the non-essentials" not only greatly curbed the quantity of the inflow of silver but also encouraged the rulers to seize and keep in their possession by far the greater part of the wealth of the society, that is, precious metals.

The feudalist ruling class resorted to various ways and means to dispose of the wealth of society which they had seized from the industrialists and merchants and the working people. They would spend them on lavish and extravagant luxuries and entertainment, or would hoard them in the cellars of their house in order to keep intact the symbol of their wealth and power, or would use them to purchase land in order to pursue the feudal way of rental exploitation and thus to reap the benefits without having to work, or would utilize them as usury capital to suck the blood of the poor and wretched peasants. In short, what the corrupt ruling class was interested in was how to amass and enjoy the wealth of society. They never thought of converting the funds into capital for use in productive enterprises. Thus, in the situation of the feudalist ruling class having in their hands the wealth of society but failing and never thinking of investing sufficient funds in production and reproduction, naturally the economy of the social structure was kept in a prolonged state of stagnation and slow development. Even though over the lengthy period of historical development the spread of capitalism did finally appear, yet because of the lack of the needed capital funds and the support of a formidable production force, capitalism had no way to develop speedily and in a healthy manner. The traditional policy of feudalism and its conservative and ossified way of thinking have been the main causes for China's remaining in a backward state for a prolonged period of time.

## NATIONAL POLICY AND ISSUES

### NEWSPAPER COMMENTS ON ECONOMIC READJUSTMENT

HK240036 Beijing REDMUN RIBAO in Chinese 15 Jan 81 p 5

[Article by Xu Gang [6079 0474]: "Only Readjustment Can Enable Us to Stand Firm and Continue to Advance"]

[Text] To readjust the national economy, we must withdraw sufficiently. Only if we have withdrawn sufficiently can we stand firm and continue to advance. Basically, to withdraw sufficiently is to readjust our ideology, policies, plans and measures so that they will conform to the conditions of our country. To withdraw sufficiently does not mean that everything will be withdrawn. We must withdraw regarding excessive scale of capital construction, heavy industry products in ample supply and blind development of light industry. However, as a whole, agriculture and light industry must be promoted.

Readjusting the national economy involves a problem of sufficient withdrawal. How should we comprehend sufficient withdrawal? Why should we withdraw sufficiently? In a word, only if we withdraw sufficiently can we stand firm and continue to advance.

In the 1960's, we carried out a great readjustment in our national economy. Sufficient withdrawal was proposed then. In the course of readjustment, a large number of projects were either stopped or postponed, the scale of construction was reduced and a large number of industrial enterprises were closed, especially some small enterprises which consumed a lot of energy but were very inefficient. In general certain major proportional relations basically resumed the standard of the "first 5-year plan." Once again a situation of relative balance and harmony reappeared and economic effects improved: heavy industry went down by 37.2 percent, light industry up by 27.8 percent and agriculture up by 42.2 percent. There were abundant supplies in the market and the people's living standards improved. Urban and rural areas prospered, and in general the whole country enjoyed the great achievements of readjustment.

The historical lesson of the "great leap forward" and the experience of the first readjustment are extremely valuable. It is a pity that we did not do well in clarifying the problems from an ideological point of view. Therefore, very soon the idea of impatience for quick success arose once again. After 1970, the rate of accumulation was maintained at over 30 percent, the capital construction front grew longer, and apart from promoting projects of the third line, the five small enterprises including those producing iron and steel, chemical fertilizer and



agricultural machines were vigorously developed. The number of industrial enterprises in 1976 increased by 140,000 compared to 1965. There were large loopholes in energy and raw materials, and many enterprises did not have enough work to do. The proportion of heavy industry was raised from 50.3 percent in 1965 to 59.6 percent in 1976. The management system was sabotaged and the standard of management fell. The idea of anarchism spread unchecked and the economic results declined tremendously. The quality, consumption, production costs and profit rate indices of many goods and many enterprises were worse than in 1965 and 1957, and large amounts of unsaleable goods were stocked in the warehouses. The waste and loss during the 10-year upheaval were horrifying.

After the smashing of the "gang of four," in the 2 years before the 3d plenary session of the 11th Central Committee, there was no change in the mentality of impatience for success, and high rate of accumulation and targets were maintained. In 1978, the rate of accumulation was as high as 36.6 percent; at the same time large amounts of equipment and installations were imported from abroad, the scale of capital construction was growing larger and larger, and the front of industrial production became even more far-flung. By the end of 1978, the number of industrial enterprises and units was 348,000, which was 54,000 more than in 1976. The proportion of heavy industry rose to 61.7 percent. The situation of imbalance became even worse.

In light of this situation, after the 3d plenary session of the 11th Central Committee, the eight-character principle centering on readjustment was put forward. During the past 2 years, we have scored great achievements; in particular in the rural areas. The situation is gratifying. However, we must say that the industrial sector has not yet grasped readjustment. Therefore, the major contradictions have not yet been solved. There are some new problems which are expressed in concentrated form in the large deficits in 2 successive years. (The root cause is basically the high accumulation and investment in the past 10 years or so.) This situation fully illustrates that we must not grasp readjustment, otherwise, we cannot stand firm and advance persistently. The various parts of the national economy are interrelated and interact on each other; they not only promote each other to develop continuously, but also restrain each other to develop to a certain standard and within a certain limit. Once we exceed the limit, harmony and balance will be sabotaged, and development will become stagnant, stop, or may even go backward. At present, part of the national economy has developed too fast, exceeding objective needs and feasibility, thus, some other parts are squeezed. This causes serious disproportion. From the angle of the macroeconomy, the rate of accumulation is too high, there is excessive productive accumulation, consumption is squeezed, development of heavy industry is far too fast and too great, while the development of light industry and agriculture is squeezed, and the development of processing industry is too fast and too great, which does not match the development of energy and raw material. From the angle of the microeconomy, the refining capacity of steel and iron is greater than the ore extraction capacity and coal extraction out-runs tunnelling (stripping). All these imbalances must be readjusted so that harmony and balance can be resumed and the national economy will progress persistently.

At present, economic accounting and economic results are ignored, and so, waste of material, labor and manpower is serious. From the macroeconomic point of view, the long fronts of capital construction and industry itself is a great extravagance.

At present, on the one hand, quite a number of fixed assets are often left unused; equipment is underused, hence production capacity is not fully employed. On the other hand, disregarding the balance and the objective needs in energy and other raw materials, we blindly build many duplicate factories. From the microeconomic point of view, many projects and industrial enterprises are not well managed and the system is imperfect. There is no quality control and no quota for raw material consumption, production cost is not considered and the variety of products does not meet the needs of the market. This results in great accumulation of products. The profit rate of most enterprises is far below the best recorded level. All these things require that we greatly reduce investment in capital construction, stop or suspend some projects and concentrate our labor and material to speed up the projects under construction, reduce input consumption and improve the quality of work and the effects of investment. As for industry, we should close or halt many enterprises so that the enterprises continuing in operation can genuinely insure normal supply of energy and raw material for them, and have enough to do, further strengthen management, tap potentials, and do our best to increase production and practice economy as well as increase profits.

What is meant by sufficient withdrawal? Basically, means to proceed from the actual situations in China in everything we do. What is meant by the actual situations in China? The most important thing is that over 800 million of the some 1 billion population are peasants. There are so many people who need food, clothes, commodities, housing, schooling and work. If we do not first arrange the life of the 1 billion population, how can we ask for stability and unity, not to mention construction.

In the past few years, the state has done a lot to improve the living standard of the people, for example, the procurement price of agricultural products has been raised, the wages of staff and workers have been readjusted and the bonus system has been practiced. Many residential buildings have been constructed in the urban areas. However, our country is still very poor. To gradually improve the living standard of 1 billion people so as to keep in step with the development of production, everybody in the country must work very hard. Thus, the rate of accumulation must not be raised and the economic structure in which too much emphasis is put on heavy industry must be changed. This is the major content of readjustment.

To readjust the national economy, some projects should be withdrawn, and we must withdraw them sufficiently. The current pressing problem is that the rate of accumulation is too high and the front of capital construction is too long. The number of enterprises has increased too fast, there is excessive heavy industry and processing industry, and there is great expenditure. Only if we reduce the excesses to a sufficient extent can we readjust the imbalances to a relatively harmonious level and insure that the national economy can stand firm. In this present situation, to withdraw sufficiently is not a negative act, but a positive principle.

We should not interpret sufficient withdrawal as withdrawing everything. When the rate of accumulation is too high and the front of capital constructions too long, we must withdraw, and withdraw sufficiently. However, we must not withdraw consumption, and the consumption level of the people must not be lowered. The entire industrial front must be contracted. We must also close, halt or amalgamate a number of factories or switch them to other production. Heavy industry must retreat,

and blindly-developed light industry and factories which engage in duplicate production must be closed. However, in general, light industry production must be promoted, the level of total industrial gross productions must maintain a certain speed, and agricultural production too must be promoted. We should distinguish heavy industry products in excessive supply from those in short supply. We must reduce or stop production of those in excessive supply, and strive to increase the production of short-supply items. We must not think that to withdraw means withdrawing everything. To withdraw where we should means to provide conditions for promoting sectors that should be promoted. If we do not try hard to promote items that should be promoted, we are misunderstanding the principles of readjustment and withdrawal. Regarding products that should be promoted, first of all, we must rely on the original enterprises to strengthen coordination between specialized departments, improve management, raise labor efficiency and lower consumption per unit in order to increase production. If the market demands are not met even though the productive capacity of the original enterprises has been brought into full play and reached saturation level, we must first organize those enterprises that do not have sufficient production tasks and transfer some production tasks to them. At present, basically speaking, capital construction and new production capacity are not required for products whose production should be promoted. Of course, production of energy products such as crude oil and hydroelectricity cannot be transferred. The problem of energy shortage can be overcome by economizing consumption in the coming years. At present, there is serious energy waste. The most effective way to economize energy consumption is to close those medium and small enterprises which consume excessive energy and whose techniques are backward. At the same time, we must gradually change decentralized supply of energy (each enterprise supplying its own energy) to centralized supply of energy (for example: central supply by thermal power stations), improve management and lower the level of energy consumption.

We should withdraw in poor-quality products of high energy consumption which do not meet the demands of the market and for which, objectively speaking, there is no great need, to spare some energy and raw material for the increasing production of products which are of good quality and meet the needs of the market and for which, objectively speaking, there is great demand. This will greatly economize social labor so that the limited amount of energy and raw material can be used more rationally and the economic results will be still better. At the same time, departments and enterprises that have reduced their production tasks can concentrate their energy to improve the quality, varieties and standards of products. In particular, varieties in short supply in our country must be promoted, so that the gap can be filled and imports reduced. Thus, although the amount of some products is reduced, these are only but excessive and useless things; on the other hand, output of products which are useful, in short supply, of use value and of higher value will increase. Therefore, the general production level and profits will not be lowered, but actually they will be raised. There is also a structural question of higher, medium and lower grades in all products. The difference in structure also has an influence on economic effects. To make a suitable withdrawal in lower-grade products and promote a greater proportion of higher and medium grades will be another important way to improve economic effects.

Withdrawing is advantageous for raising the quality of the labor force. The situation now is different from the early 1960's because the production of agriculture, light industry and energy is better now. The state's economic strength is greater and we can use different methods to handle the closed enterprises. Now, we can make use of the closed enterprises and rebuild them into cultural and technical schools for the staff and workers so that they can equip themselves better. In fact this is an investment in intelligence, which is sure to yield rich fruits in the building of the four modernizations.



## NATIONAL POLICY AND ISSUES

### 'CONGREN RIBAO' ON REASONS FOR ECONOMIC READJUSTMENT

HK170541 Hong Kong WEN WEI PO in Chinese 17 Jan 81 p 3

[ZHONGGUO XINWEN SHE dispatch: "CONGREN RIBAO Analyzes Three Reasons Why Economic Readjustment is Still Needed Today"]

[Text] Answering the question "Why is it still necessary to get a vigorous grasp of economic readjustment 4 years after the 'gang of four' were smashed?" The 16 January CONGREN RIBAO pointed out that the main reasons are: We have failed to genuinely obtain a sober understanding of China's most basic national state; certain excessive slogans and targets were put forward again in the first 2 years after the smashing of the "gang of four"; and various places failed to effectively carry out the principle of readjusting the national economy after the third plenary session, and continued to overstretch the capital construction front.

While specifically expounding on these three reasons, CONGREN RIBAO wrote:

In the first 2 years after the "gang of four" were smashed, we failed to sufficiently estimate the serious consequences of the 10 years of sabotage, neither did we clear up leftist guiding ideology in economic work; we again put forward certain excessive and unrealistic slogans and targets and again greatly expanded the scale of capital construction which already exceeded the state's financial capacity. It was without doubt correct for China to break down the closed door, make use of foreign capital and import technology; however, due to our lack of experience, we imported excessive amounts of complete sets of equipment, which exceeded actual needs and feasibility. This repeat of an old mistake under new historical conditions intensified the imbalance in proportional relations and increased our financial and economic difficulties.

Although certain results were gained in readjusting the national economy after the third plenary session, many people from the central authorities down to the basic levels lacked full understanding of this guiding principle and failed to carry it out effectively. The overstretched capital construction front was never reduced; this caused tensions in all aspects. We failed to adopt resolute and effective measures to carry out readjustment and rectification regarding those enterprises with poor management, high input consumption, great waste and serious financial losses. Duplicate construction and blind development increased instead of declining. According to incomplete statistics, by the end of 1979, 21 provinces, municipalities and autonomous regions had closed, suspended, amalgamated or shifted to other production over 3,000 enterprises at and above county-level, but the total number of

industrial enterprises in the whole country had actually increased by over 6,000. Sectors that should have retreated failed to do so, while time was also lost in carrying out necessary readjustments (certain oilfields, coalmines and other mines), and a certain degree of confusion emerged in the national economy.

The article says: "Under these conditions, the Central Committee and State Council have decided to carry out further serious readjustment in order to turn the whole national economy from passive to active and turn budgetary and credit imbalance to balance. This decision is completely correct. The main features of this readjustment are that capital construction should make a sufficient retreat, administrative expenditure should be cut, and the nation should act according to its capabilities in production, construction, administrative facilities, and improvement of the people's living standards. Only by vigorously grasping readjustment can we stabilize the economy, prices, and living standards, eliminate potential dangers in the national economy and insure the building of the four modernizations proceeds in a healthy way on a firm basis."

CSO: 4006



## NATIONAL POLICY AND ISSUES

### 'GONGREN RIBAO' ON ECONOMIC READJUSTMENT

HK240628 Hong Kong TA KUNG PAO in Chinese 24 Jan 81 p 3

[Report: "'GONGREN RIBAO' Commentator's Article Points Out, China Should Follow A New Path in Economic Development and Straighten Out the 400,000 Existing Enterprises"]

[Text] Beijing, 23 Jan (ZHONGGUO XINWEN SHE)--"GONGREN RIBAO" points out in a commentator's article today that China should follow a new path in economic development. This path consists of straightening out and building well the 400,000 existing enterprises, first doing a good job of work in several thousand large and medium enterprises, to improve their economic results and tap their potentials.

The "GONGREN RIBAO" commentator's article is entitled "Strive to Embark On a New Road in Economic Development." The article says, for a long time China has followed a path of attaching much importance to capital construction and little to production, a path of high accumulation and low efficiency. This path can only be maintained by cutting people's consumption and retaining an excessively high rate of accumulation. On the surface, the growth of production could certainly not be called slow, but in fact very little social wealth has been created and the people have not derived much benefit from it. Taking today's economic results as an example, and comparing them with relatively high levels in the past, generally speaking it now takes 2 yuan to accomplish things that only needed 1 yuan then. In the past it took 3 to 5 years to build projects and put them into production, but now 8 to 10 years are needed. There is shocking waste in production, capital construction and circulation. Although we have realized this and done something about it in the past few years, we have not achieved much.

The commentator's article points out, China should mainly rely on bringing into play the role of its existing enterprises to develop its economy, carry out rational technical improvements, reduce input consumption, and improve quality and efficiency. During the readjustment period, we must first carry out readjustments to correct the major imbalances and gradually rationalize the economic structure; and secondly we must run the existing enterprises well and improve their economic results. We should make efforts for several years to achieve a great improvement in degree of organization, standard of management, levels of production technology and so on in those enterprises. At the same time, we must step up survey of resources, geological surveys, planning and design, and proving of schemes and other pre-capital construction preparatory work, to create fine conditions for essential future construction.

Another article in the "GONGREN RIBAO" today says that it is necessary to continue during today's economic readjustment the reforms of economic structure and system that were launched in China's enterprises more than 1 year ago; however the pace of the reforms should be a bit slower.

Over 6,000 enterprises in China are currently carrying out economic reforms. The main topic in the reforms is to expand decisionmaking powers; a few enterprises where it is feasible are acting as pilot projects in substituting tax for profit, independent accounting, and taking full responsibility for their own profit and loss. The trial economic reform work in the great majority of these enterprises has yielded relatively good results. However we still cannot carry out all-round economic reforms because of the imbalances that exist in the national economy, and the enormous financial deficits that have occurred.

The article says: One of the major topics in economic reform is to change the economy from the simplex, command-style regulation by planning mechanism of the past to integration of regulation by market mechanism with regulation by planning mechanism. However, practice has also shown that normal conditions in supply and marketing are the prerequisite for bringing into full play the role of regulation by market mechanism. Under conditions of serious imbalances in the national economy and of total demands for production material and consumer goods far exceeding total supplies, people are not worried that they will be unable to sell products that are in short supply even if their quality is poor and price high. In this way, not only is it a fact that enterprises cannot be spurred to improve production and management; in addition, if the necessary administrative intervention and market controls are relaxed, market and price chaos will be increased, which will cause phenomena such as rushing to buy up everything in bulk, going in for speculation, hiking prices and so on. Therefore, under present conditions, the state must strengthen the aspect of regulation by planning regulation; we cannot allow the spontaneous market forces to influence readjustment and reform and to lead enterprise management onto a sinister path.

Secondly, under the conditions of serious imbalances in the national economy and extremely abnormal supplies of materials, energy and so on, the external conditions of the enterprises are not normal and their production and profit performances cannot be completely determined by the enterprises themselves; it is therefore difficult to make full and effective use of enterprise management decisionmaking powers. This state of affairs has already arisen at many enterprises acting as pilot projects in expanding decisionmaking powers.

CSO: 4006

## ECONOMIC PLANNING

### CIRCULAR ON TIGHTENING MARKET PRICE CONTROL IN HEBEI ISSUED

Shijiazhuang HEBEI RIBAO in Chinese 1 Jan 81 p 1

[Circular of Hebei Provincial People's Government: "Urgent Circular on Problems of Tightening Up Market Price Control"]

[Text] The market situation as a whole is good in our province. With industrial and agricultural production developed and the channels of commodity circulation increased, the urban and rural markets are enlivened day by day. However, because control work is falling behind, the market is thrown into disorder in some localities. Speculation and profiteering activities are gaining ground, directly jeopardizing the readjustment and stability of the national economy, pounding at state plans and adversely affecting people's livelihood. We must protect the normal trade activities that abide by state provisions, vigorously develop the commercial network and centers in cities and towns and resolutely carry out the established policies so as to enliven the economy further, suit the convenience of the masses and promote development of production. We should also pay attention to the problems arising from normal trade activities and resolve them properly. The following circular is hereby issued on some problems of tightening up market price control:

(1) Purchase of grain, fat and oil-bearing materials and negotiation of prices are all to be handled by the grain department without intervention by other departments. The raw materials required by the catering trade to prepare cooked foods for sale may be purchased at local fairs. Without approval of the provincial grain bureau, grain, fat and oil-bearing materials are not allowed to leave this province. Grain and oil sent to relatives and friends by post or grain consigned for shipment by train or truck may not exceed 50 jin; peanuts may not exceed 20 jin and vegetable oil may not exceed 5 jin. Market transactions of cotton including homespun cloth and yarn are strictly forbidden.

(2) The policy of state monopoly for purchase and marketing must be strictly carried out with regard to cotton cloth, cotton yarn and knit cotton goods requiring ration cards. With the exception of trial sale of new products, the industrial department may not sell by itself and the commercial department may not reject deliveries. No units or individual may unlawfully purchase and process state-controlled cotton cloth and cotton yarn or sell finished products. Those units handling cotton cloth, clothing and knit cotton goods must demand ration cards according to state provisions.

(3) Except the departments designated by the state, no units and individuals may handle manufactured goods in categories 1 and 2 without approval. The commercial department and industrial department should dovetail their plans, sign contracts and strictly carry them out. Provided fulfillment of state purchase plans and of contracts is insured, factory and mine enterprises may sell their products according to provisions. In the case of manufactured goods handled by state-owned and collective enterprises and by small retailers, the retail prices fixed by the state must be implemented. Licensed small retailers may handle small commodities for every day use. Unlicensed small retailers reselling at a profit must be resolutely banned.

(4) State-owned and collective enterprises as well as organs, groups and enterprises can only engage in business activities stipulated by the higher level and, without exception, they may not resell at a profit. State-owned and collective brokerage warehouses [hang zhan 5887 2770] should keep their operations within the limit set by the province and are not allowed to rush to purchase at higher prices.

(5) All organs, groups, military units, enterprises and institutions in and out of the province may not purchase category 1 and category 2 farm produce and sideline products in the rural districts or at the fairs. Those units purchasing category 3 farm produce and sideline products in producing centers should register at the local industrial-commercial administrative departments and purchase at unified prices, in limited quantity and in the localities designated by the competent department; or else, the competent department shall make purchases on their behalf. Where products are purchased without approval, purchase shall be made [by the competent department] at par. Serious cases shall be dealt with sternly.

(6) Among category 2 and category 3 farm produce and sideline products, the industrial raw materials and export commodities of greater importance and products having a close bearing on people's livelihood shall be purchased by the competent departments concerned under unified plans and no other units in and out of the province may meddle in their operations. Communes and brigades transporting their products over a long distance for sale should seek approval of the local industrial-commercial administrative department who shall make out the necessary certificates.

(7) Vegetable teams in the suburbs of cities (including Langfang, Hengshuizhen) should seriously implement the policy of serving the livelihood of urban people. They should grow vegetables in adequate amount and effectively according to state plans. The state shall put into effect "state monopoly for purchase and marketing of vegetables" or "state order and monopoly for marketing of vegetables." Through full consultations, peasants and merchants shall sign production-marketing contracts which must be strictly carried out and may not be broken. Remaining vegetables left after fulfilling the contracts may either be purchased by the merchants through consultation with the peasants or sold by the peasants themselves. Selling prices of vegetables must be subject to strict control. The prices of ordinary vegetables may not be increased as one pleases while the prices of rarer vegetables should be controlled flexibly according to market conditions. Those vegetable teams who enter into cities to set up centers for selling their produce after obtaining approval should subordinate themselves to state price control. Those units coming from other provinces and municipalities to this province for purchasing vegetables should make purchases through the overall arrangements made by the competent department, in designated places, at prescribed prices and in limited quantity.



(8) Broaden the outlets for developing industrial and agricultural production, increase production of commodities that are in demand, improve the quality of commodities, increase the design, color and variety of commodities, and provide the market with a larger supply of goods.

(9) Freely develop collective commercial enterprises and the network and centers of service and repair trades, appropriately restore individual commercial undertakings, enliven the market and suit the convenience of the masses. The state will provide support in terms of commodity wholesale, tax payment, funds and loans.

(10) Continue to enliven the fair trade, insure proper transactions and ban unlawful activities. Provided state tasks of purchase are not adversely affected, rural commune members with the consent of their production brigades and the approval of the industrial-commercial administrative department may engage in activities within their means (carrying goods on their shoulders and by hand, pulling by manual labor, carrying goods by bicycle) of handling farm produce and sideline products that are within the scope prescribed by policy. Hiring laborers and using means of transportation like motor vehicles and trains to buy goods and resell at a profit should be resolutely banned.

(11) Deal resolute blows to speculation and profiteering. The following falls into the category of speculation and profiteering: Unlawfully reselling the means of industrial and agricultural production at a profit; rushing to buy at higher prices the commodities that are on the list of planned state purchase; fraudulently buying commodities from the state-operated stores and the retail stores of supply-marketing cooperatives and selling them at increased prices; individuals doing wholesale business by hanging hands on the spot; black market brokers making undue profits; speculating and reaping unfair gains by taking in sub-contractors; cornering the market, hoarding goods to sell at higher prices; reselling planned-supply cards and bank securities at a profit; reselling gold, silver, foreign currency, jewelry, cultural relics, foreign goods, valuable medicinal materials; doing shoddy work, using inferior materials, adulterating and passing the false as the real, thereby doing serious harm to industrial and agricultural production and the people's livelihood; selling certificates, invoices and contracts, making out certificates and invoices on behalf of others, signing contracts on behalf of others, providing bank accounts, checks and cash so as to make unlawful income.

All units and individuals engaging in speculative activities shall be taxed and fined or their property shall be confiscated according to provisions; serious cases shall be turned over to the judicial organs and dealt with according to law. State Cadres taking part in speculative activities shall be sternly dealt with.

(12) Governments at all levels should tighten up market price control, pay regular attention to the trends of market prices and take prompt measures upon discovery of problems. They should do a good job of propaganda and education work and teach the masses to consciously abide by the relevant policies of the state. Under the unified leadership of the people's government, the departments of industrial-commercial administration, commodity prices, commerce, supply-marketing, grain, tax, public security, agriculture, industry and communications should cooperate closely and support one another in doing a good job of market control. Violations of the market control regulations shall be dealt with by the responsible industrial-commercial administrative department.



Where former provisions contravene the content of this circular, the provisions in this circular shall be enforced.

All municipalities and countries may issue notices or circulars in light of local conditions.

31 Dec 1980

9770

CSO: 4006

## FINANCE AND BANKING

### BRIEFS

HEILONGJIANG DEPOSIT INCREASE—Due to income increases in rural areas and a pay raise for staff members and workers in urban areas, bonus extension and the increased bank interest rate, Heilongjiang Province increased its people's deposits on a large scale last year, surpassing the 1979 figure by 58.5 percent. The money deposited by rural people reached 190 million yuan, 68.4 percent of the total provincial people's deposits, and surpassed the 1979 figure by 72.7 percent. [Harbin Heilongjiang Provincial Service in Mandarin 1100 GMT 1 Feb 81 SK]

CSO: 4006

FORMATION, MIGRATION OF CONTINENTAL OIL, GAS IN CHINA

Beijing ZHONGGUO KEXUE [SCIENTIA SINICA] in Chinese Vol 23, Nos 10, 11

[No 10, Oct 80 pp 1286-1295]

[Part one of two-part article by Fan Pu [5400 3877], Luo Binjie [5012 2430 2638], Huang Ruchang [7806 3067 2490], Shen Ping [3088 1627], Hui Rongyao [1920 2837 5069], Shao Hongshun [6730 1347 5293], Wang Youxiao [3769 2589 1321] and Rong Guanghua [2837 0342 5478], all of the Lanzhou Institute of Geology, Chinese Academy of Sciences]

[Text]

ABSTRACT

This article summarizes a wealth of geological and geochemical data concerning oil fields in China. From a study of palaeo-climate, salt content, sedimentary hydrodynamics, geotectonics and other respects, it is believed that the "continental moist depression" is the basic requirement for the formation of continental oil and gas. It is also pointed out that a humid and semi-humid climate, long steady sinking of the earth's crust, fresh-brackish water medium and hydrodynamically still environment in the centre of lake circulating flows are more favourable for the formation of oil and gas. According to the formation and development of the Mesozoic and Cenozoic moist depressions, we have come to the general rule of the distribution of continental oil-gas field in China.

Over a hundred large and small oil fields have been found in the Mesozoic and Cenozoic continental strata in our country through over twenty years' oil exploration; it has been revealed that continental strata could provide fundamental conditions for the formation of oil in large quantities. Nearly all the continental oil and gas fields in our country are distributed in continental moist depressions. This article gives a general description of our research on palaeo-climatic, tectonic, sedimentary water medium and hydrodynamic conditions for the formation of continental oil and gas, as well as on the conversion of organic matter into oil and gas.

I. A FUNDAMENTAL GEOLOGICAL CONDITION FOR THE FORMATION OF CONTINENTAL OIL AND GAS — CONTINENTAL MOIST DEPRESSION

In late Palaeozoic with the southward retreat of the sea the Northern Continent began to grow and expand after Sino-Indian movement gradually toward the south. Many Mesozoic and Cenozoic continental basins formed on the Hercynian or Caledonian

folded basement. Oil source rocks developed widely under certain conditions. The area of a continental lake basin might be very large. For example, the Triassic deposits of the Shaanxi-Gansu-Ningxia Basin covers an area of more than 300,000 km<sup>2</sup>. The Cretaceous Lunduan lake basin of the Songliao Basin encompasses an area of 100,000 km<sup>2</sup>, with a region of 50,000—80,000 km<sup>2</sup> favourable to oil formation. Some block basins, even though small, have a thick sequence of oil source rocks.

### 1. *Palaeo-climatic Condition*

The amount of organic matter in continental deposits depends, in the main, on the palaeo-climatic and water medium conditions. Under a humid and semi-humid climate, a great deal of biota multiplied in fresh and brackish water lakes. Being buried at the lake bottom after death, the biota became the mother matter for the formation of petroleum.

In the late Jurassic, there could be differentiated three climatic zones: the northern humid one, the middle semiarid one and the southern humid one. After the Cretaceous, the arid climatic zone extended gradually while the humid climatic zone reduced. In the Paleocene and Eocene the climate became arid-semiarid in China. After the Oligocene, three climatic zones developed in our country.

In the Shaanxi-Gansu-Ningxia Basin and Zunggar Basin, lake deposits developed to form the source rock series. The Yanshang series (T.Y.-T.Y.) of the Shaanxi-Gansu-Ningxia Basin represents deposits of the flourishing stage of the lake development, with a dominance of dark mudstone and oil shale. In the period of T.Y., the lake basin reduced and clastic sediments increased. In the period of T.Y., the lake basin was dismembered, resulting in many separate swamps.

In the early and middle Jurassic, the climate became humid over a wide area, and lakes and swamps developed. In the Zunggar, Tarim, Turpan, Shaanxi-Gansu-Ningxia and Sichuan Basins, source rock series of lake facies developed. On the margin of the basins, a lot of separate swamps formed simultaneously.

In the late Jurassic, there could be differentiated three climatic zones in China. In the northern humid climatic zone some local source rocks were formed usually in the downfaulted swamps within the basins, such as the Songliao Basin and Hailar Basin. In the middle semiarid climatic zone, there were red bed deposits.

In the early Cretaceous, the middle semiarid zone contracted, while the northern and southern humid zones expanded correspondingly. In the northern humid climatic zone, fresh and brackish water lakes were well-developed from the Songliao Basin and Hailar Basin up to the Inner Mongolia region with a wide distribution of the Cretaceous source rocks. The Lower Cretaceous source rock series in the Songliao Basin is 700—1000 m thick, serving as a source of large oil and gas field.

The wide-spread gypsum deposits in the middle arid climatic zone made it unfavourable to oil formation. However, in the Jiuquan-Minle Basin and Lupan Mountains area, the local influence of semi-humid climate led to the formation of fresh and brackish water lakes and source rock series. The Huahai depression and Jiuxi Basin linked up and formed into one continuous region in the early Cretaceous which received deep and intermediate lake facies deposits amounting to a thickness of 540 m.

After the late Cretaceous and up to the Paleocene and Eocene, the climate became arid throughout our country, resulting in the extensive deposition of red beds, gypsum and salts with the source rocks localized only in a few places.

In the Oligocene and Pliocene there occurred in many continental basins in the southern and northern humid climatic zones an abundance of coal, oil shale and siderites. Some stratigraphic zones of the sequence, having a dominating lake facies, provided good conditions for oil formation due to their greater content of organic matter and strong reducing environments. The Laohu and other basins in Northeast China and the Hengyang, Nanning, Bose, Banahui and other basins in South China are examples. In the middle arid climatic zone red beds or gypsum and salt deposits cover a vast expanse of land. But, in the Qaidam and Zunggar Basins, owing to the local influence of semi-humid climate, there were nevertheless fresh and brackish water lakes and hence source rock series. Tertiary source rocks were also found in the relatively desalinated layers of the salt-bearing strata in the Jiangnan Basin.

In addition, the oceanic humid airflow kept on coming to the continent, leading to an increase of rainfall along the eastern coast of China and the formation of many fresh and brackish water lakes: the Tertiary deposits in the Bohai Bay, North Jiangsu and Hefei depressions all belong to this type. The Bohai Bay depression is the most developed region of Tertiary system in the eastern part of China. The Paleocene sediments rich in organic matter may be as thick as 5000—8000 m. The thickness of source rock series is 700—2000 m.

The continental sedimentary basins in Northwest China developed earlier. Besides the above-mentioned three climatic cycles, there was another one from the Carboniferous to the early and middle Triassic. During the Carboniferous, humid climate prevailed over a wide area and source rocks were more or less widespread. The climate became semiarid in the late Permian and early and middle Triassic. The source rock series has a higher  $S^{2-}$  content,  $Fe^{2+}/Fe^{3+}$  ratio, and oxidation-reduction coefficient, as well as a higher content of organic carbon and chloroform bitumen "A" and ratio of bitumen to organic carbon (Fig. 1).

## *2. A Long Continued Subsidence of Lake Basin is Favourable to the Formation of Oil and Gas*

After the Sino-Indian movement, owing to the subsidence of platform blocks and the rise of folded regions and under the influence of X-shaped fault, some NW or NWW rhombohedral basins were produced in western China, such as Qaidam, Zunggar, Tarim and Jiuxi Basins. In the middle of these basins, there is, in general, an upwarped zone which separates the basin into two parts. The southern part is commonly deeper, and filled with thicker sediments — a better essential condition for oil formation — as exemplified by the Jurassic and Tertiary Qigu oilfield, Duzishan oilfield and others in the Urumqi piedmont depression on the southern margin of Zunggar Basin, and by the Tertiary oil-gas fields in the southern part of the Qaidam Basin and Guya depression. In eastern China, the formation of oil-bearing basins was controlled by the NNE basement faults of the X-type tectonic systems so that they are en echelon arranged. A single continuous depression was often disrupted into a number of secondary depressions by block faulting. Between the above-mentioned two types of basins,





there are others bounded by EW and NE basement faults, usually with a greater subsidence in the western and southern parts, e.g. the greater southwestern subsidence in the late Triassic time and the western subsidence in the Jurassic in Shaanxi-Gansu-Ningxia Basin.

In China, the Mesozoic and Cenozoic continental basins have the following features: a long continued subsidence, accompanied by a thick pile of sediments and a roughly identical subsidence and sedimentary centre. Those having a long and great subsidence are favourable to oil formation on account of a thick accumulation of superimposed source beds.

In the course of geological history, there was a migration of the centre of the depression, either parallel to the surrounding mountains as in the case of the Ürümqi piedmont depression with a westward shift of the centre of depression from the Jurassic to the Tertiary times, or counterclockwise around the median uplift as in the case of the Shaanxi-Gansu-Ningxia Basin: from the southeastern part of the basin in the late Triassic to the northeast from T<sub>1</sub>Y<sub>1</sub> to T<sub>2</sub>Y<sub>2</sub>, then to T<sub>3</sub>Y<sub>3</sub>, and finally to the western part in the Jurassic.

## II. ZONES CONDUCTIVE TO THE FORMATION OF CONTINENTAL OIL AND GAS — FRESH WATER AND BRACKISH WATER, DEEP AND INTERMEDIATE LAKE, AND STAGNANT WATERS

### 1. Water Medium Condition for the Formation of Continental Oil and Gas

The Mesozoic and Cenozoic continental source rocks in our country contain abundant fresh and saltish water biota, such as Charophytes, Gastropoda, Pelaeopoda, pisces, algae and Ostracoda. Only in some intercalations of the Tertiary source rocks in North China, marine forms such as Foraminifera and Polychaeta were found. They are small and flat with thinned walls and weak shell decorations. They often coexisted with fresh water fossils. The content of trace elements such as B, Sr, Ni, Cr and V, and the ratio of Sr/Ba and B/Ga are relatively low. But the ratio of Cr/V is higher. All this indicates their continental fresh and brackish water origin.

The salinity of the continental oil- and gas-bearing basin is controlled by climate and replenishment conditions, fluctuating within a certain range, mostly in a fresh and brackish water environment. Since the Mesozoic and Cenozoic, the general trend has shown a gradual salinization. The Cl<sup>-</sup> content in the upper Triassic and lower Jurassic source rocks is generally 0.01—0.03%. It is fresh water. The Cl<sup>-</sup> content of the Upper Jurassic and Lower Cretaceous series is generally 0.01—0.03%, partly 0.03—0.10%. The salt content of the Tertiary source rocks is higher, i.e. mostly brackish water, and occasionally saltish water (Fig. 2).

In general, three types can be distinguished here according to the salinity of the fossil lake basin.

1) Fresh and brackish water lake type. It is formed in humid and semihumid-semiarid climate. During the flourishing period of the lake, the water became desalinated and source rocks developed. In the process of evolution from fresh water to brackish water, oil and gas formed in the meantime. The water medium of the most important source rocks in the continental basins in China belongs to this type, e.g. the

lower Tertiary source rocks of Bohai Bay depression and the Cretaceous source rocks of Songliao Basin.

2) Fresh and brackish water lake-bog type. It is formed mostly in humid and semihumid climate. The organic matter contained in the lake deposits may develop

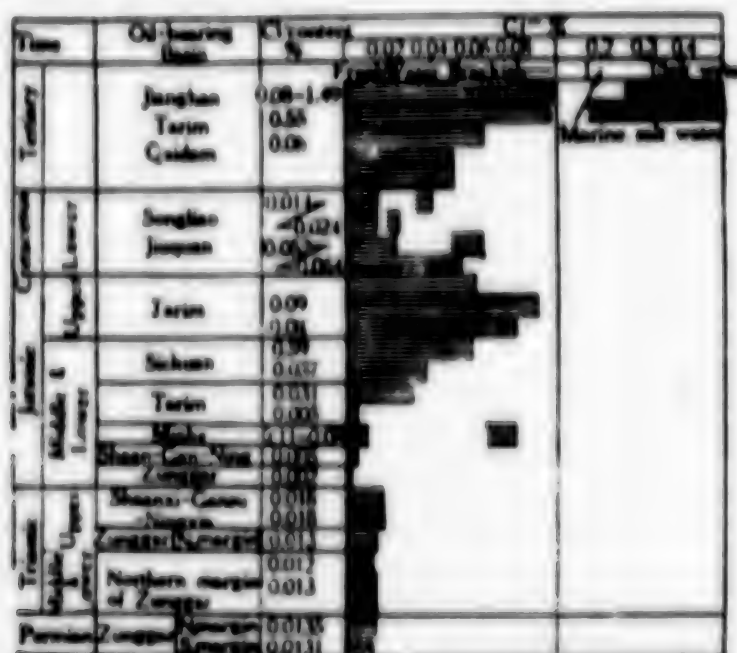


Fig. 2. Extent of Cl⁻ content in continental oil-bearing basins.

into oil and the bog vegetation into coal. The environments for the formation of oil and coal may alternate in time and space. A certain amount of oil and natural gas may form in coal measures. This type is often seen in the Permian and Jurassic systems in northwestern China.

The water medium in the Zunggar Basin (Kalamayi region) and Shaanxi-Gansu-Ningxia Basin obviously went through a cyclic evolution. The first Jurassic coal-bearing formation, Daowan group (J<sub>1</sub> + 2) and Yenan group (J<sub>1</sub> Y), was formed when the water was freshest. It belongs to fresh water bog type. The second coal-bearing formation, from Xiahanyao group to Touhehai group (J<sub>2</sub> + 3) and Zhiluo group (J<sub>2</sub> C), contains more salt, showing the salinization of water.

Thus the source rocks are developed at a stage when the water becomes relatively salinized and desalinated, whereas the coal measure unit is developed at the initial stage of the formation of basins or the late stage of the development of lakes.

3) Salinized lake type. It is mainly formed in semiarid and arid climate. In the initial development of the lake, the water was somewhat fresh. Later on, it became salinized gradually into a salt lake. Oil was formed at the stage of fresh and brackish water, and salt at the stage of saline water. But, oil and gas might be also formed when and where the saline water was relatively freshened in a lake region even during the later stage. The Tertiary system of the Jiangnan Basin belongs to this type.

From the Cretaceous to the end of Tertiary, the Jiangnan Basin underwent a gradually reduced sedimentation and was recharged by saline water. The quality

evolved two cycles. Source rocks commonly appeared in the middle of each cycle, i.e. in the freshening period of the relatively steady subsidence. Those that formed at the carbonate stage are better, and those formed at the sulfate stage come next.

Our researches on the Qinghai Lake and other present-day lakes have proved that the species of organisms are different with salinity. Sediments of fresh water lake have a higher content of organic matters and gum, while those of a salt lake have a higher content of organic matters and bitumen. And the sulfur content in oil of fresh water origin is low while that of saline water origin is high.

## *2. Stagnant Waters in Intermediate and Deep Depressions are Conducive to the Accumulation and Preservation of Organic Matters*

The hydrodynamic regime of a lake is complicated. The Qinghai Lake has seven main feeders, with the Buha River in the western part being the biggest. It continues to flow after projecting into the lake, forming a main channel running from west to east with two circulating currents each to its south and north. The circulating current that flows round the Haixin Hill is the main one in the lake. In the northern part of the lake region, some backwater is formed under the influence of several rivers which flow into the lake. In the estuary area of the lake, secondary backwater is formed, too. Offshore along the lake, reversed flows are formed by breakers. In the 28-m-deep lake, the wave action stirs up a depth of 8 m. The influence of wave current can reach a depth of 14 m while the lake current 23 m. A vertical stratification of stirring water, mixed layer and relatively stagnant water layer thus results.

According to the hydrodynamic properties, we can divide the lake into five hydrodynamic areas (Fig. 3).

1) Water injecting area at the river mouth, where delta sands and main channel sands extending into the lake are formed. The water bodies contain much oxygen, but no  $H_2S$ . They have  $Fe^{+++}$ , but no  $Fe^{++}$ .

2) Marginal shallow wave-stirring area. The water is 0—14 m deep. Within the depth from 0 to 8 m, well-sorted beach sand is formed, but within the depth from 8—14 m, the sorting becomes worse. There is very little  $Fe^{++}$  and no  $H_2S$ . It is a stronger oxidation area.

3) Intermediate water area with lake and wave currents. It is located like a ring on the inner side of the water-stirring area. The water there is 14—23 m deep. The deposits are silt and silty clay and ooze. It is an area of weak oxidation and reduction.

4) Deep water area influenced by lake waves. The water is more than 23 m deep. The water bodies in the lower layer are not affected by lake currents and waves. There is a marked vertical stratification of water layers. The deposits are silty clay mud and calcareous clayey mud carrying some  $H_2S$ . The layer of stirring water is thick, and the stagnant water layer thin in the northern depression, but quite the reverse in the southern depression where  $H_2S$  increases close to the bottom. It is the strongest reducing area of the lake.

5) Estuary backwater area. The water here is comparatively stagnant. The deposits are silt-clay mud and clayey mud.



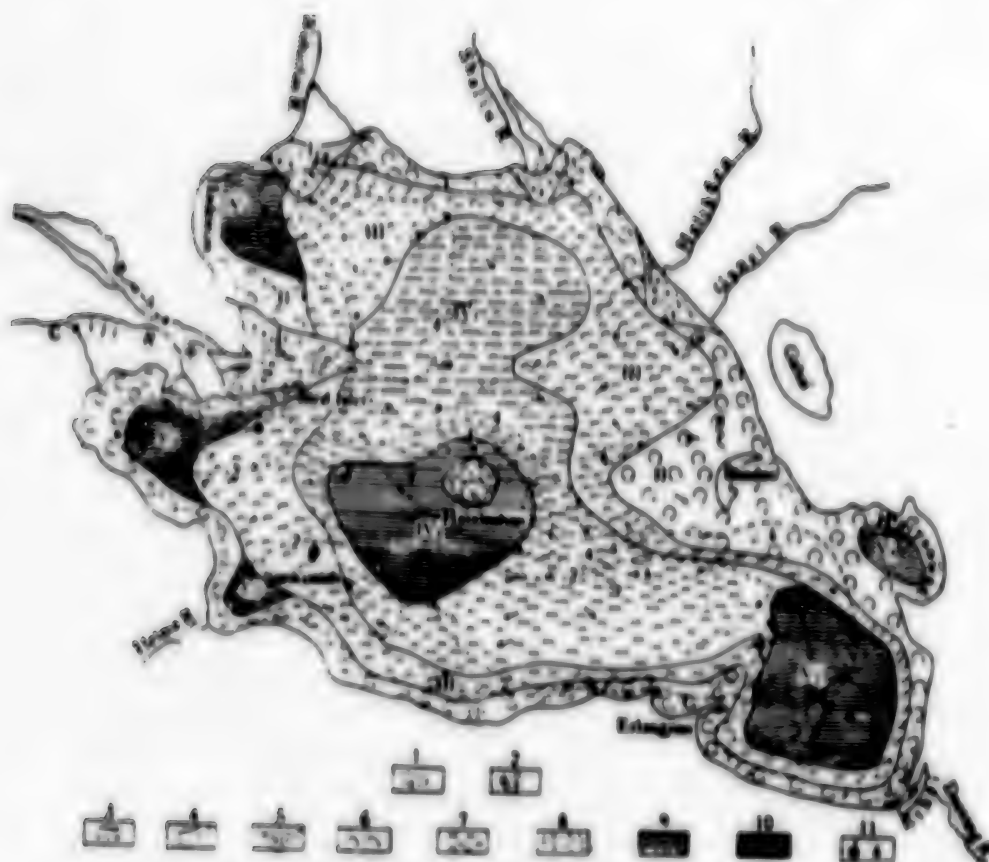


Fig. 1. Distribution of hydrodynamic areas of Qinghai Lake.

From the viewpoint of energy level, among the above-mentioned five hydrodynamic areas, the first and second areas are of high energy, the third of medium energy, and the fourth and fifth of low energy.

The hydrodynamic differentiation of the lake determines the pattern of sediments distribution at the lake bottom. The depth limit of the vertical hydrodynamic zone determines the extent of distribution of various sediments.

Sands and silts are generally distributed in the zone less than 15 m deep. Argillaceous silt and silt mud are accumulated in the zone 15—25 m deep. Silt mud and clayey mud are distributed where the water is more than 25 m deep. Coarse sediments are deposited at a greater depth at the mouth of the river and along the main channel, and fine sediments at a smaller depth in the backwater area of lake flows.

In the high-energy zone, the organic carbon and nitrogen content are less than 1% and 0.1% respectively. In the low energy zone, it is generally more than 2% and 0.2%. At the place where the river flows into the lake, the low-organic carbon zone becomes widened. Where the main channel of Buhai River passes, the organic carbon content decreases, dividing the lake into two high-value zones where the organic carbon content is more than 2.8%: one in the south and the other in the north. Both are located right in the centre of the two circulating flows. In the deep and intermediate water circulating area over the depression centre and in the backwater area of the lake cove, the

sediments are in a reducing environment favourable to the accumulation and preservation of organic matter.

### 3. *Three Types of Hydrodynamically Stable Areas in the Continental Basin, Forming Multiple Oil-forming Centres*

(1) Still water area in the centre of circulating flows. It is located in the centre of circulating flows on both sides of the main channel. On the whole, there is a concentric zoning of sedimentary facies in the Mesozoic and Cenozoic continental basins. From the margin to the centre, the sediments pass successively from the piedmont alluvial facies into plain river facies, marginal and shallow water lake facies, and deep lake facies. But, owing to the fact that the continental lake is often fed by one or more main rivers, coarser sediments are laid down in the water-circulating area at the river mouth where the main channel passes. Thus a single depression is separated into a number of areas with differing favourable conditions to oil formation.

The main Tertiary source rock unit T<sub>3</sub>Y<sub>1</sub> of the Shaanxi-Gansu-Ningxia Basin was cut into five areas of more than 50% mudstone by several rivers that fed the lake. Among the five areas, three are distributed in the western and southern parts of the basin, in which the thickness of the mudstone is more than 60—70%. During the most developed period, T<sub>3</sub>Y<sub>1</sub>, the sedimentary centres became linked into a continuous one. The effect of river dissection is not so striking as that in T<sub>3</sub>Y<sub>1</sub>. But the hydrodynamic effects upon the distribution of the areas of more than 50% mud stone and upon the organic carbon content and the distribution of the Fe<sup>+++</sup>/Fe<sup>++</sup> ratio are still very marked.

The source rocks of the Tertiary Xingousui group in the Jiangnan Basin was separated into four favourable oil-forming areas by the Hongang, Maoshan and Mianyang Rivers that fed the lake in three different directions, namely Huayuan, Huduhe, Zongkou-Diaoti and Fengkou areas. In the more hydrodynamically stable area, the oil-forming condition is the best.

The dissection by rivers becomes efficient only when their recharging power is relatively high. When the recharging power is low or the lake basin is very large, the sand zone laid down by the main channel may extend deep into the region of source rocks, which borders the oil-forming region on three sides — a condition quite favourable to the gathering of oil and gas.

(2) Still water area of backwater in the lake cove. On the whole, there are three kinds of lake coves in the Qinghai Lake. In the Haiyan Bay in the northeast of the Qinghai Lake, where aqueous wind-drift sands are deposited, the water is shallow, unfavourable to the preservation of organic matter. The water of the lake cove in the southeast is more than 23 m deep and the water of the shallow lake coves on both sides of the Buha River in the west of the Qinghai Lake is less than 10 m deep; sediments in such lake coves have a low Eh value and a high bituminization coefficient, favourable to the preservation of organic matter. Therefore, a large lake cove may form into a semi-closed area favourable to oil formation.

(3) Still water area at the lake bottom of a deep depression. The water is deep and the still water layer is thick. All this is favourable to the preservation of organic

matter. In the Mesozoic and Cenozoic continental basins in our country, uplifts and depressions are produced by block faulting. Source rocks develop in deep depression, such as the Qijia-Gulong depression in the Songliao Basin, Qingxi and Shibe depression in the Jiuzi Basin, Qikou and Bangqiao depression in the Huanghua region, and the Ruoyang and Baxian depression in the region of central Hebei.

To sum up, in the Mesozoic and Cenozoic, the tectonic depression provides a basis for the formation of lakes. The evolution of organic matter in fossil lake basins is influenced by climatic conditions. At the stage when the climate is humid and semi-humid and the earth's crust undergoes a long and steady subsidence, fresh and brackish water lakes develop, and hydrodynamically still environment in deep lakes is favourable to the formation of continental oil and gas.

#### REFERENCE

- [1] 中国科学院兰州地质研究所等,《青海湖综合考察报告》, 科学出版社, 1979.

[No 11, Nov 80 pp 1417-1427]

[Part two of two-part article by Fan Pu [5400 3877], Luo Binjie [5012 2430 2638], Huang Ruchang [7806 3067 2490], Shen Ping [3088 1627], Hui Rongyao [1920 2837 5069], Shao Hongshun [6730 1347 5293], Wang Youxiao [3769 2589 1321] and Rong Guanghua [2837 0342 5478], all of the Lanzhou Institute of Geology, Chinese Academy of Sciences]

[Text]

#### ABSTRACT

This article concerns the features of the evolution of organic matter in the process of diagenesis during the initial and early stages of the burial of present lake sediments. It is brought out to light that the depth of conversion of continental organic matter into oil varies with the different arena, geological times and types of organic matter. By integrating data of some characteristic organic compounds and isotopes of some rare gases with the structural developments we give an exposition in this article of the types, scales and ways of the migration of continental oil and gas in China and point out that short distance migration from source area is most characteristic for continental oil and gas.

#### I. FORMATION AND EVOLUTION OF OIL AND GAS

For an understanding of the whole process of the conversion of organic matter into oil and gas of the continental basin sediments during the initial and early stages of diagenesis, we have made a study of the Qinghai Lake, a present lake in China. It can be divided into three stages according to the development of organic matter.

The first stage, the initial stage of sedimentary burial (1—2 m deep): The superficial sediment at the bottom was a thin oxygenated ooze layer, beneath which the sediments were reduced rapidly.  $Fe^{++}$  and  $S^{--}$  increased with the depth of burial. The clayey ooze became dehydrated rapidly, from 62.3% to 44.7%. Biochemical action dominated in this stage. The sulfate reducing bacteria was very active. Ammoniated bacteria denitrified the organic matter. Under the influence of microbes the scattered remains of organisms in the sediments decomposed the primary cellulose, saccharides, fat and albumen to give out  $CO_2$ ,  $H_2$ ,  $N_2$ ,  $H_2S$ , and low-grade fatty acid, alcohol and

anilins. From the 15 sampling places at the bottom, the content of C, N and bitumen A in the ooze decreased downwards. In the still water area of the two circulations in the southern and northern parts of the lake basin, the Eh value reached -263 millivolt and the content of C, N was high and decreased slowly downwards, thus resulting in its better preservation and providing a substantial basis for further conversion of organic matter into oil and gas. Our researches indicate that all the source strata of many Mesozoic and Cenozoic continental basins in China develop in such regions.

After the organisms were buried at the lake bottom after death, the constituent of organic matter changed. The fraction of living parts increased from 10% to about 25%. In the chloroform bitumen of such organisms, such as fish and cladophora, the C, H content increased while the O, N, S content decreased. All these reflect that after their burial the organisms began to cast off heteroatomic functional groups and heteroatoms. At the same time there was hydrogenation, and the undissolved organic matter (accounting for 92—95%) formed kerogen.

The second stage (20 m deep): The activities of microbes were still strong, especially within the depth of 10 m. Continuous decomposition of organic matter led to a loss of 60—70% of its original content. Beyond the depth of 20 m, the C content was comparatively stable. It changed within a certain range, mainly dependent on the lithological character and differences in sedimentary environment. But, the C/N ratio and the chloroform bitumen increased gradually. Oil matter raised rapidly downward, reaching about 50%. The C, H content in bitumen increased continuously. But, O, N, S decreased still further to 7.4—9.5%. Besides CO<sub>2</sub>, H<sub>2</sub>O, N<sub>2</sub>, and H<sub>2</sub>S, the organic matter also gave out a large amount of CH<sub>4</sub> in this stage.

The third stage (20—200 m deep): The geochemical action gradually became predominant. With increasing burial, the organic matter began its transformation. The loss of organic matter lowered down and became stable. Oil matter continuously increased to 70%. The C, H content in bitumen rose continuously and the O, N, S content decreased continuously. Pyrolytic experiments indicate that with the increasing burial of organic matter in sediments, the composition of heavy hydrocarbon in pyrolytic gas increases accordingly.

The process of conversion was influenced by the primary mother organisms in sediments. If the primary mother organisms were mainly higher plants (xylon, cellulose), aromatic acid and carbon acid would be formed with a higher content of heavy constituents. And lower forms would be more favourable to the conversion toward oil. For instance, the two samples collected from the same horizon from two bore holes in the Qinghai Lake give considerably different compositions of bitumen because of different mother organisms, although they may have undergone the same time of transformation at the early stage of diagenesis after their burial (Table 1).

Researches on the Lower Cretaceous sedimentary rocks of the Songliao Basin also indicate that the depth and temperature for organic matter to turn into oil and gas vary with different types of organic matter. The depth and temperature for sapropel-type organic matter to turn into oil are lower than those for saprophyte-type organic matter (Table 2).



Table 1

Hole No.	Sample No.	C Organic	Total Bitumen (%)	Chloroform Bitumen Making Up of the Total (%)	Oil Matter	Bitumen Matter (%)	Fe <sup>++</sup> /Fe <sup>+++</sup>	Organic Matter and Sedimentary Facies
Qing 4	89-91	0.41	0.04	88.80	89.04	8.49	2.94	Lower aquatic organisms, deep lake facies
Qing 5	89+40	3.08	0.165	63.80	33.96	60.17	2.73	Bed of higher plant remains, littoral lake facies

Table 2  
Depth and Temperature for Different Types of Organic Matter to Begin Turning into Oil in Large Quantities

Horizon	Sedimentary Facies	Type of Living Things for Forming Organic Matter	Type of Organic Matter	Beginning to Form Oil in Large Quantities	
				Buried Depth (m)	Temperature (°C)
Q <sub>4</sub>	Intermediate-deep lake facies	Lake aquatic organisms	Sapropel	1100-1150	54
Q <sub>3+4</sub>	Deep lake facies, lake cove	Mainly lake aquatic organisms, including terrestrial plants	Sapropel-Saprophytes	1250	59
n <sub>1</sub>	Intermediate-deep lake facies	Lake aquatic organisms	Sapropel	1000	51
Q <sub>2</sub>	Bog facies	Mainly terrestrial organisms	Saprophytes	1500	63
Q <sub>1+2</sub>	Bog facies	Mainly terrestrial organisms	Saprophytes	1350	62
n <sub>2</sub>	Bog facies	Mainly terrestrial organisms, including lake lacustrine organisms	Saprophytes	1400	65

To sum up, though the organic matter in the Quaternary sediments of the Qinghai Lake presents a trend of turning into oil hydrocarbon, it is still in a stage of initial conversion, namely, a stage of the formation of methane. The Quaternary natural gas in the Qaidam Basin and in the continental strata of the lakes in the eastern part of our country is also a product of initial conversion. The compositions of natural gas (depth varying from 30 m to 1400 m) are identical with each other.  $\text{CH}_4$  is mainly 80—98% and  $\text{CO}_2$  is 2.11—23.2%. The constituent of organic matter in gas-generating rocks is characterized by a main content of non-hydrocarbon (60—66%).

Researches on the formation and evolution of oil and gas in the main continental basins in our country indicate that the evolutionary stages of source rocks in different basins differ from each other because of different geological conditions. For example, in the Shaanxi-Gansu-Ningxia Basin, the Upper Tertiary oil and gas is at a stage of intermediate maturity. The Jurassic oil and gas is already at a stage of high maturity. In general, quick sedimentation, great thickness and high paleo-geothermal condition are favourable to the conversion of organic matter into oil and gas. Most of the crude oil in the continental basins in China is at a stage of medium maturity. The crude oil in only a few basins belongs to the stage of high maturity, such as the Banqiao Lower Tertiary of the Huanghua depression (3500—4600 m deep, 135°C), the Jurassic of the Sichuan Basin and the Permian of the Zunggar Basin.

When the burial of source rocks reaches a certain depth, the ratio of hydrocarbon and organic carbon increases obviously. The odd and even superiority disappears gradually and the organic matter begins forming oil. The later the geological times, the deeper depth and higher temperature will be needed for the formation of oil (Table 3).

The evolutionary stages and features of organic matter in continental source rocks are the same with those in marine source rocks. Therefore, in a sedimentary basin from the marine Palaeozoic to the continental Mesozoic and Cenozoic, the evolution of organic matter may have formed a comparatively full series of oil and gas evolution. For example, the main source bed ( $\text{T}_1\text{Y}^1 + \text{T}_1\text{Y}^2$ ) of the Shaanxi-Gansu-Ningxia Basin is 300—600 m thick. With increasing age and burial of sediments, the changes of the chloroform bitumen "A"/organic C per gram, the constituent of organic matter and the composition of elements reflected an increase of metamorphic grade. When the oil-forming rocks reached a depth of 1700 m, that is to say, corresponding to the late stage of J<sub>2</sub>C sediments, large quantities of oil began to form. At the same time an upward vertical migration happened, resulting in spatial distribution of oil in rocks of different ages. The properties of oil vary from the Yanchang series and the Yan'an group. With increasing burial and age of sediments, the crude oil became "light" and the maturity increased. This phenomenon was also observed in many basins, such as the Xialiaohe and Zunggar Basins.

The evolution of the organic matter and oil and gas in the sedimentary rocks of the Shaanxi-Gansu-Ningxia Basin are characterized by: the crude oil of Mesozoic era was at a stage of medium maturity; the Middle Carboniferous source rocks formed light crude oil (specific gravity 0.80); the main peak carbon of normal paraffin was  $\text{C}_{11}$ ,  $\text{C}_{12}$ , belonging to the stage of high maturity; the free radical of bitumen matter in the rock increased with increasing age (Fig. 1). The Lower Palaeozoic group was

Table 3  
Depth and Temperature for Source Rocks to Begin Generating Oil in Different Geological Times

Basin	Geological Time of Source Rock	Temperature (°C)	Depth of Burial (m)
Shaanxi-Gansu-Ningxia Basin	Upper Trias	55-62	1700
Jiuxi Basin	Lower Cretaceous	60-65	1400-1600
Dongying Basin	Lower Tertiary	68	2300
Huanghua Basin	Lower Tertiary	90	2300
Xialimiao Basin	Lower Tertiary	92	2300-2500
Songliao Basin	Lower Cretaceous	51-59	1000-1350

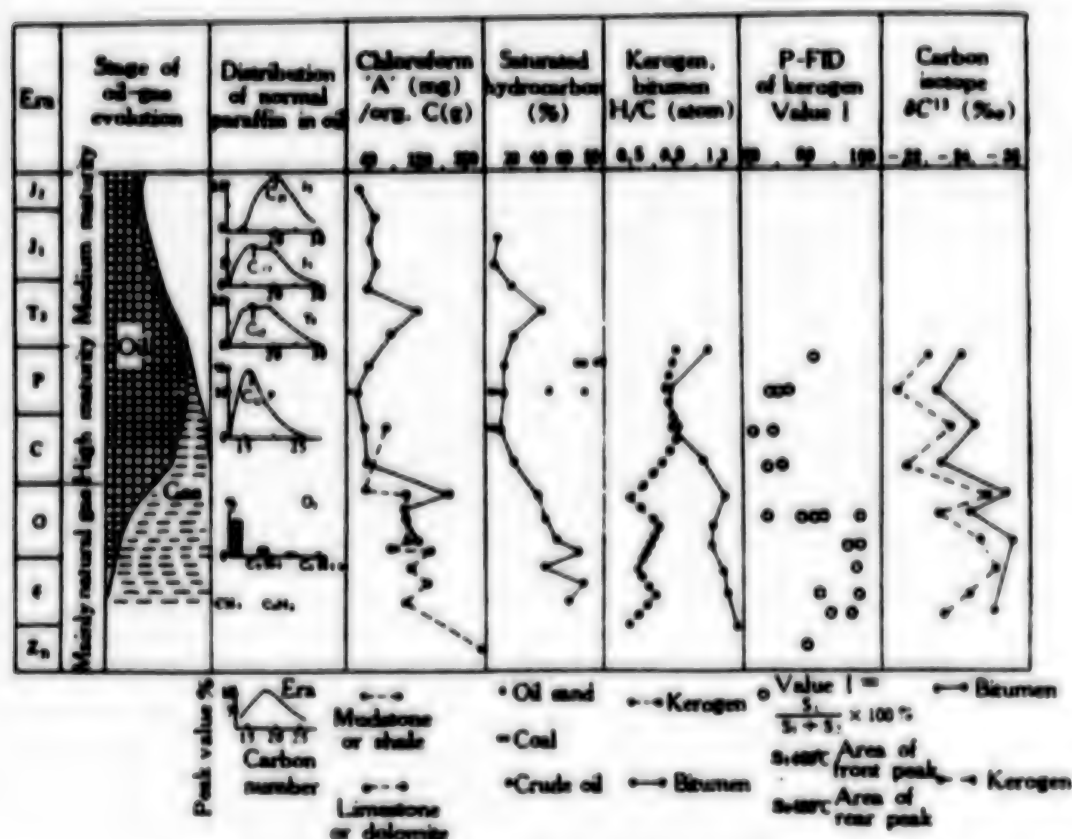


Fig. 1. Evolution of oil-gas of Shaanxi-Gansu-Ningxia Basin

at a stage of essentially gas formation. Some saturated hydrocarbon of organic matter in the rock was as high as 70—80%. The free radical of the bituminous matter lowered down with increasing metamorphic grade. The changes of elemental composition H/C (atomic ratio) between asphaltine and kerogen of Palaeozoic group differed markedly with increasing age. The relations between kerogen and chloroform bitumen  $\delta C^{13}$  and the decrease of  $\delta C^{13}$  were reflected in the process of evolution. The pyrolysis peak of kerogen of Palaeozoic group showed an increase of light constituents. A comparatively complete evolutionary process of oil and gas was formed from Palaeozoic group to Mesozoic group.

The source rocks of the Jixi Basin were mainly Xinminbao group of Lower Cretaceous (K<sub>1</sub>X<sub>1</sub>), about 500 m thick. With increasing burial and maturity, the hydrocarbon/organic carbon, the content of saturated hydrocarbon, the OEP value of normal paraffin and the distributive curve of organic matter in source rocks all reflected that oil and gas began to form at the depth of 1400—1600 m.

Because of block-faulting movement, the continental block basins in our country have formed many dissected oil-forming depressions. The conversion of organic matter varies with different geological times, resulting in a distribution of oil and gas with different maturities in a basin. For example, the oil-forming seg in the northern part of the Jiyang depression rose gradually after the sedimentation of the 2nd part of Shahejie group, bringing about a decreasing depth of the source rocks of the 3rd part of Shahejie group. The maximum depth of burial is only 1430—1480 m. The content of hydrocarbon is 260 ppm. The conversion of organic matter is low. But, the oil-forming seg in the southern part descended stably. The burial of source rocks is as deep as 3000 m. The content of hydrocarbon reaches 1780 ppm. The conversion of organic matter is high. Oil and gas are abundant there. Owing to different geological times, the middle seg of the Huanghua depression is an age-long successive one from the beginning of Oligocene. And so, the source rocks are thick, the depth of burial is deep and the maturity is high. But, the southern seg has undergone an upwarping. The maturity of oil and gas is low. Oil and gas are not abundant there. The maturity is low (heavy). This phenomenon can also be seen in the Xialiaohe Basin.

## II. SOURCE-NEAR AND SHORT DISTANCE MIGRATION—FUNDAMENTAL FEATURES OF CONTINENTAL OIL AND GAS

The Mesozoic and Cenozoic continental sediments in our country were mostly produced in the process of down-faulting and down-warping. Rapid subsidence and sedimentation led to a thick pile of ill-sorted sedimentary rock. Some of the block basins are long and narrow. High surrounding lands and rapid erosion resulted in deltas and alluvial fans perpendicular to the strand line. There are many kinds of aggregation of continental sediments: alluvial sandstone wedges, channel sandstones, littoral sandstones and littoral-lake facies sand bodies. They have generally a limited distribution and a greater change in physical properties — probably a main cause for short-distance migration of oil and gas.

The Shaanxi-Gansu-Ningxia Basin rose as a whole during the Indo-China Movement. Erosion and dissection in the early Jurassic might almost reach the source bed T<sub>1</sub>Y<sup>2+3</sup>. The direct contact of the basal Yan'an sandstone with the source and reservoir rocks of the Triassic system made it possible for the oil and gas of Triassic system to migrate to the bottom of Jurassic system and gather there.

According to the distribution of the whole hydrocarbon chromatogram of crude oil and other data, the crude oil in eastern Gansu can be grouped into two.

Layer Yan 4—8 Groups: The main peaks of normal paraffin in the whole hydrocarbon are distributed between C<sub>11</sub>—C<sub>25</sub>. The main peak carbon is C<sub>15</sub> or C<sub>20</sub>. The peak value of isoprenoid is high. The pristane/17 heptadecane averages 0.62 while the phytane/18 heptadecane is 0.52 (Table 4).



Layer Yan 9—Yanchang Series Oil Group: The main peaks of normal paraffin in the whole hydrocarbon are distributed between  $C_7 - C_{20}$ . The main peak carbon is  $C_{10}$ . The relative peak value between pristane and phytane of isoprenoids is low. The pristane/17 heptadecane and the phytane/18 heptadecane are both below 0.4. On the whole, from Yan'an group to Yanchang series, the crude oil is maturing steadily. But Layer Yan 8 is a dividing line. The maturity above and below the line differs notably. Above Layer Yan 8, long carbon paraffin hydrocarbon plays a dominant role in

Table 4  
Correlation Between Crude Oil and Mammals Source Rocks in the Shunxi-Guan-Ningxia Basin

Horizon	Crude Oil (Average)			Source Rock		
	Pr/Ph	Pr/ $\alpha C_{17}$	Ph/ $\alpha C_{18}$	Pr/Ph	Pr/ $\alpha C_{17}$	Pr/ $\alpha C_{18}$
Lower Jurassic Layer Yan 4-8	1.10	0.62	0.58	1.45	0.84	0.86
				1.68	0.97	0.88
Upper Triassic Yanchang Ser.—Lower Jurassic Layer Yan 9	1.21	0.85	0.81	1.97	0.80	0.82
				1.23	0.50	0.50

Remark: Pr, Pristane; Ph, Phytane.

this group. Below Layer Yan 9, short carbon paraffin hydrocarbon takes the first place.

The two oil groups are affiliated with corresponding source rocks. The pristane/phytane, pristane/17 heptadecane and phytane/18 heptadecane of the source rocks of Lower Jurassic Yan'an group are all higher than those of the underlain Yanchang series. It is another oil source. The Upper Triassic Yanchang series provides the main source of the reservoir beds below Layer Yan 9. In addition, the basin consists of a great monocline dipping gently toward the west. The oil and gas are gathered in the sandstone lens after a short distance migration, mostly lithologic reservoirs or structural-lithologic reservoirs (Table 4).

In recent years turbidities have been found in the block basins of the Bohai Bay. For example, in the western Xialiaohe depression there is a group of turbidity lens intercalated in the black mudstone in the upper part of Sha Section 3. The reservoir bed is generally 40—60 m thick and only a few metres in some places. They are liable to form high-pressure and high-yield reservoirs. In continental sedimentary basins, where the more developed large sandstone bodies or channel sands are linked up with the oil-forming depressions, the oil and gas tend to migrate parallel to the extension of the sand bodies.

The Lower Cretaceous Yaojia sandstone in Songliao Basin is very well developed. It is thick-bedded or massive with a greater porosity and is persistent over a wide area. This sand layer extends from the anticlinal zone to the neighbouring Qijiagulong and Sanzhao depressions as fingers and sheets. In the northern part of the Sanzhao depression there are three high sandstone zones stretching southwards into the depression and linking up in the north with the main sandstone body of Xingzhugang delta. Oil and gas may have migrated and accumulated along the sandstone body towards the Daqing anticlinal zone.

By studying the behaviours of aromatic compounds of the crude oil, using ultra-violet ray spectrogram and approximately reflecting the relative content of light and heavy aromatics in terms of the ratio of E230/E260, it was found that the content of aromatics increases from the synclinal to the anticlinal zone. With the increase in the distance of migration the content of Fe, Ni decreases continually. The fact that the Fe content in the crude oil of Putashua Layer decreased from surrounding depressions to the Daqing anticline shows that oil and gas might have migrated along the sand body towards the anticlinal zone.

In the region of the Bohai Bay, all the oil pools in the six depressions are distributed round the oil-forming centre. Thus, short distance migration from the source is most characteristic of continental oil and gas. The formation and distribution of oil-gas pools depend basically on the size and shape of the oil-forming basin.

It appears that the palaeostructures control the direction of oil-gas migration, while tectonic cycles may have resulted in different periods of oil formation.

Nearly all the Mesozoic and Cenozoic inland basins in our country have been influenced by alpine movement. Those areas consolidated before the Mesozoic were re-activated in Yanahanian movement — polycyclic orogeny. All Mesozoic and Cenozoic sequences in China have oil-forming and reservoir rock series, constituting a favourable combination for oil trap.

In the latest stage of Indo-China movement, the Shaanxi-Gansu-Ningxia Basin uplifted and formed a palaeo-structural frame high in the southwest and low in the northeast which decided the direction of oil-gas migration. In eastern Gansu, the ratio of H% and H/O+N+S of the organic element composition in the asphaltene of the crude oil of Layer Yan 10 shows a remarkable increase from northeast to southwest, reflecting the trend of oil-gas migration which began from the end of Lower Jurassic to the end of Middle Jurassic.

Multi-stage migration of oil occurred also in the Daqing anticlinal zone. Before the sedimentation of Nenjiang group, the anticlinal zone had already taken shape. The local structures were formed in the course of the sedimentation of Nenjiang group. The oil mainly came from the Lower Cretaceous Qinghankou group. The source rocks of Qinghankou group in the Qijiaolong and Sanzao depressions began their conversion into oil at a depth of 1200 m, roughly corresponding to the sedimentation of the 3rd—4th parts of Nenjiang group. A comparatively strong tectonic movement at the end of the sedimentation of Nenjiang group in the Songliao Basin resulted in large folds.

At the end of the sedimentation of Minghui group, the Songliao Basin rose again. The Daqing anticlinal zone was consequently further strengthened, followed by a re-migration and readjustment of oil and gas.

The source rocks of the Laojunmiao anticlinal zone of the Jiuxi Basin are of Tertiary, Cretaceous and Silurian systems, the crude oil being all of the ceresine hydrocarbon type. The peak values of the whole hydrocarbon of different crude oils are fundamentally similar. The position of the main peak is mainly  $C_{25}$ , subordinately  $C_{24}$  and individually  $C_{27}$ . The distribution of isoprenoid (characteristic compound) is also fundamentally similar. The ratios of Pr/Ph, Pr/ $nC_{17}$  and Ph/ $nC_{18}$  of the crude oil are very similar to those in the source rocks of Cretaceous system.

Spore-pollen analysis of crude oil and the radiometric age determination of the rare gases indicate that the Cretaceous Xiaxinminbao group K<sub>1</sub>X<sub>1</sub> provides the main oil source of the Jiuxi Basin (Table 5).

The Cretaceous source rocks in the Jiuxi Basin had undergone two periods of oil migration. In the western part of the basin, the Cretaceous sediments in Qingxi de-

Table 5  
Correlation Between Crude Oil and Source Rocks in Jiuxi Basin

Geological Time	Index	Crude Oil (Average)			Source Rock		
		Ph/Pr	Ph/nC <sub>17</sub>	Pr/nC <sub>17</sub>	Ph/Pr	Ph/nC <sub>17</sub>	Pr/nC <sub>17</sub>
Tertiary system	K-BC	1.05	0.59	0.45			
	L	1.04	0.45	0.50			
	M	1.06	0.44	0.49			
K <sub>1</sub> X <sub>1</sub>		0.86	0.40	0.74	0.85—1.10	0.45—0.69	0.59—0.81

pression attain a thickness of 2000—2500 m. After the sedimentation of the source rocks, there was an outpouring of basalt. The high geothermal gradient promoted the "maturity" of source rocks. This was the first period of oil migration. On the surface of unconformity between the Cretaceous system and the Silurian metamorphics in the Yaerxia region, there was bituminous infiltration. The bitumen infillings in the basement might be as thick as 100 m and more. It was a product of the first migration. Wide erosion after the sedimentation of Lower Cretaceous system led to the absence of Upper Cretaceous sediments. The Himalayan orogeny at the end of Shulehe group (N<sub>2</sub>S) uplifted the Laojunmiao anticlinal zone from west to east. In the western part, the Lower Cretaceous K<sub>1</sub>X<sub>1</sub> source rocks were widely developed in the Qingxi depression. The crude oil of the western part is characterized by a higher specific gravity and viscosity, a higher solidifying point of ceresine, and a smaller ratio of heavy and light normal paraffins, which increases gradually toward the east. The content of porphyrin compound also decreases gradually from west to east. All this reflects that the oil and gas might have migrated and gathered at Yaerxia, Laojunmiao and Shiyoukou through faults and unconformity planes, forming reservoirs in the Tertiary system (Fig. 2).

The Himalayan orogeny fundamentally followed the tectonic directions and nature of Yanshanian movement. It is characterized by block faulting and associated with superposed depressions. The repeated activities of faulting might have resulted in repeated migrations and accumulations of oil and gas.

After a study of 37 core samples from three bore holes in the western depression of the Liaohe Basin, it can be seen that from top to bottom (especially the Shahejie group, the well is less than 1620 m deep) illite increases while montmorillonite decreases. The two present a mixed structure. At the third part of the Shahejie group (1950—2190 m) there appeared the illitization of montmorillonite, losing the inter-layer cohesion of the latter and thus bringing about the first migration of oil and gas. The Shahejie group of the western depression of the Liaohe Basin was a rapid sedimentation. The thickness of the third part of the Shahejie group is 3400 m in the centre of the Qingshuigou depression and 2400 m in the centre of the Chenjia depression.

At the end of Shahejie group, oil and gas formed and began to migrate, mainly forming lithologic pools in the 3rd part of Shahejie group.

At the end of Paleogene Dongying group, all the source rocks of Shahejie group in Bohai Bay Basin were well within the oil-forming zone. At the end of Dongying group, tectonic movement was rather strong, and the resulting structures and faults were favourable to the oil-gas migration. At the same time, some secondary reservoirs were formed. At the end of the Neogene Minghuashan group, Himalayan movement



Fig. 2. Oil-gas migration of Lacustrine artificial area in Jinxi Basin.

became active once more, and oil and gas were accordingly redistributed, resulting in the formation of some more secondary oil pools.

Repeated tectonic movements caused oil and gas to be distributed in many horizons. Gas is mainly in the upper part while oil in the lower part.

To sum up, the polycyclic alpine tectonic movement brought about many periods of oil-gas migration in the basins. In general, there are two or more periods of migration. From Table 6, we can see that the migration periods of Anding group (at the end of Middle and Lower Jurassic), Mingshui group (at the end of Upper Cretaceous), Dongying group (at the end of Paleogene) and Shalehe group (at the end of Neogene) are the most important. They are the four main migration periods of the Mesozoic and Cenozoic basins in our country. The duration of oil-gas migration in oil-bearing basins is long. It may span several epochs. For example, the source rocks of the Shaanxi-Gansu-Ningxia Basin belongs to Upper Triassic Yanchang series. Its migration period is in Jurassic. The oil on the northwestern edge of the Zunggar



Table 6  
Periods of Oil Migration in Mesozoic and Cenozoic Continental Basins in China

Geological Time		Oil and Gas Layer	Feature of Tectonic Movement	Main Source Rocks	Main Migration Period	Basin Type	Representative Basin
Upper Tertiary system	Minghsia group	✓ ✓	Himalaya movement		Shalels group	Block-downward type	Jiuxi Basin
	Quanzao group	✓ ✓					
Lower Tertiary system	Dongying group	✓ ✓	Mainly blockfaulting	Shalels group	Dongying group	Block type	Bohai Bay Basin
	Shalels group	✓ ✓		Kongdian group	Shalels group		
	Kongdian group	✓ ✓					
		✓ ✓					
Upper Cretaceous series	Minghsia group		Second episode of Yanchen movement		Minghsia group	Downward type	Songliao Basin
	Minghsia group						
Lower Cretaceous series	Nanjiang group	✓ ✓	Mainly uplifting and subsideance	In part of Nanjiang group	Nanjiang group		
	Yanfa group	✓ ✓					
	Qinghsien group	✓ ✓					
	Quanzao group	✓ ✓					
	Donghsien group	✓ ✓					
Upper Jurassic series J <sub>1</sub>	Anding group	✓ ✓	First episode of Yanchen movement		Anding group	Depression type	Shanxi-Gansu-Ningxia Basin
Middle Jurassic series J <sub>2</sub>	Zhiluo group	✓ ✓	Downward type uplifting and subsideance movement				
Lower Jurassic series J <sub>3</sub>	Yan'an group	✓ ✓	Block type mainly tectonism		Yan'an group		
	Faxian group	✓ ✓					
Upper Triassic series	Yancheng group	✓ ✓	Intra-China movement elevation	Chang section 2+3		Depression type	Zouggou Basin
Middle-lower Triassic series	Karemay group	✓ ✓	and subsideance movement				
Permian system	Wufo group	✓ ✓		Wufo groups			

Basin comes from the Permian system while its migration period is in Triassic-Jurassic. The source rocks in the Jiuxi Basin belongs to Lower Cretaceous system and its main migration period is at the end of Upper Tertiary.

#### REFERENCE

- [1] 中国科学院兰州地质研究所等,《青海油田综合考察报告》,科学出版社,1979年。

## **MINERAL RESOURCES**

### **BRIEFS**

**JILIN PREFECTURAL GOLD OUTPUT--**The 1980 total gold output of Yanbian Korean Autonomous Prefecture, Jilin Province, was 2,400 liang, 200 percent more than in 1979. The number of collective gold mines has increased to more than 10. In 1980 the output of individually mined gold was 710 liang, or 600 percent more than in 1979. [Changchun Jilin Provincial Service in Mandarin 1100 GMT 30 Jan 81]

**CSO: 4006**

## INDUSTRY

### REASONS FOR POOR SALE OF JINAN GREASE EXPLORED

Jinan DAZHONG RIBAO in Chinese 8 Nov 80 p 2

[Article by Lu Huazhong [0712 3973 0022] and Liu Xuide [0491 1331 1795]: "Why Cannot Jinan Grease Be Sold?"]

[Text] The Jinan Petrochemical Fourth Plant has had a poor sales record for its grease. The original plan called for an annual production of 4,500 tons and by the middle of September, after the Provincial Petroleum Company's discussion with some plants, the planned output was reduced to 2,730 tons. However, this plant had already produced 2,208 tons from January to September, and the production of the remaining 522 tons could be easily accomplished in 1 month. There will then be 2 idle months this year. Therefore, the cadres, workers and staff members of the plant are full of anxiety.

As for the cause of the poor sale, is the grease unwanted in the market? The answer is no. To our knowledge, it is needed for various types of machinery including motor vehicles, locomotives, bicycles and even push carts. Is it of inferior quality? According to the result of a sampling by the relevant department of the Ministry of Petroleum Industry, the grease produced by this plant was up to, or even above, the national standard. Then is the poor sale attributed to certain contradictions between industry and commerce? The answer is again no. As we understand, both the Provincial Petroleum Company and the Jinan Petroleum Wholesale Center are quite concerned about it. Although the sale of grease is a state monopoly, they have made a special concession by permitting the plant to sell it in other provinces, and the plant has further strengthened its sales force by increasing the number of persons from 4 to 20. The plant has also improved the containers for the convenience of the consumers, and the original drums of 170 kilograms are now replaced by drums of 45 kilograms of 1 kilogram, and even smaller drums and plastic bags of half a kilogram. Yet not many orders have been received.

What is the cause of this poor showing? According to some comrades of the Provincial Petroleum Company, this was first of all because of the readjustment of the machinery industry and the shortening of the capital construction front which accounted for the reduction of grease consumption. Secondly, stock inventory by various units has revealed the overstocking of grease. Thirdly, the production of grease is more than enough to meet consumption since there are now more grease-producing units. These are certainly contributory factors, but what deserves our

attention is that while the locally produced grease cannot be sold, there is quite an influx of grease from other provinces. In 1980, for example, Shengli Oilfield bought more than 800 tons of various types of grease from Wuxi, Tanggu and other places. The requirement of this unit alone is enough to keep Jinan Petrochemical Fourth Plant busy for 2 months. Here did not buy any grease produced in its own province in 1979 and 1980, and it has been reported that it does not intend to buy any in 1981 either. Why did these units prefer things from afar to what is locally available? Some comrades of Shengli Oilfield have helped us solve the riddle. The reason was that they could buy grease directly from the producers at ex-factory prices. Shengli Oilfield could annually save more than 200,000 yuan by purchasing grease from other provinces instead of purchasing local products. It clearly shows that Jinan grease could not be sold mainly because of the pricing policy and the many links involved in circulation.

The petroleum products (including grease) of our province are supplied through limited channels based on the demarcation of administrative regions. For example, there is a provincial petroleum company, under which are second-level wholesale stations in various prefectures and municipalities. Then in each county, there is a third-level wholesale station which distributes the products to the supply and marketing cooperatives serving as retailers. Unless this commercial system, characterized by the large number of links and the limited number of channels in circulation, and the sluggish turnover, is reformed, it would be very difficult to promote the sale of grease. As for prices, the ex-factory price for each ton of grease is 1,722 yuan as set by the Ministry of Petroleum Industry, while the retail price per ton is 1,722 yuan as set by the Ministry of Commerce. Neither the industrial nor the commercial enterprise have the right to adjust commodity prices according to changing market demands. Thus they have no initiative in any competition. Now that our fraternal provinces and municipalities have reformed their business methods for grease products, we suggest that the industrial and commercial authorities should sit down to study carefully the experiences of our fraternal provinces and municipalities and to introduce similar reforms. While striving to improve the quality of products, they should also reform the system of circulation by reducing the intermediary links. In order that the production and sale of grease can be enlivened, is it possible for some localities or units, where conditions permit, to bring production and consumption into a direct face-to-face contact or to grant the enterprises certain rights of price adjustment?

9411

CSO: 4006



## INDUSTRY

### BRIEFS

**YUNNAN INDUSTRY, COMMUNICATIONS**--In 1980, the people in Yunnan are expected to increase profits from industrial and communications production by 7 percent over 1979. In readjusting industrial and communications production, the people have strengthened their leadership over light industry, and the collective enterprises in the cities and countryside have sped up development. Compared with 1979, their production exceeded the average increase of industrial production throughout the province. In 1980, 1,700 new varieties of industrial and communications products were added to the market. During the same period, fuel consumption was also reduced by 3 percent over 1979 while profits increased. At the same time, 26 small nitrogenous fertilizer plants suspended production, leaving only 22 plants. [Kunming Yunnan Provincial Service in Mandarin 1100 GMT 9 Jan 81]

**GUIZHOU ECONOMIC READJUSTMENT**--Guiyang Municipality has carried out readjustment of the national economy in accordance with the implementation of the readjustment principles. The Guiyang Municipal People's Government readjusted the proportion between light and heavy industries in the beginning of 1980 and sped up the development of light industry. The government also attached importance to planned parenthood work, aiming at lowering the municipality's population growth rate. Agriculture was also developed. The total agricultural production value in 1980 was increased by 8.26 percent over 1979 and peasants' incomes were increased. In addition, the municipality's total amount of capital construction in 1980 was increased by 5 percent over 1979, and the people's residential conditions were improved. [Guiyang Guizhou Provincial Service in Mandarin 2315 GMT 10 Jan 81]

**ZHEJIANG TELEPHONE SERVICE**--A semiautomatic microwave long-distance telephone service has opened connecting Hangzhou in Zhejiang with Zhengzhou, Hankou, Nanchang and Fuzhou. Customers with established credit accounts with the Hangzhou Telephone Company may call the microwave telephone station by dialing the number 888 to place their long-distance calls. From 1981 Zhejiang will step by step establish semiautomatic microwave long-distance telephone services with Changsha, Guangzhou, Nanning, Chengdu and Xining. [Hangzhou Zhejiang Provincial Service in Mandarin 0400 GMT 11 Jan 81]

**NEI MONGGOL LIGHT INDUSTRY**--The Nei Monggol No 2 light industrial sector's 1980 output value was 590 million yuan, a 9 percent increase over 1979. The quality of the sector's products showed marked improvement. Export products produced increased 50 percent in value. [SK150954 Hohhot Nei Monggol Regional Service in Mandarin 1100 GMT 12 Jan 81]

**SHANDONG TEXTILE INDUSTRY**--The textile industry in Shandong Province witnessed a steady development in 1980. The province's 1980 textile industrial output was 4,595 million yuan, an increase of 19.36 and 21.03 percent over the 1980 production plan and the 1979 output, respectively. It netted a profit of 800 million yuan, up 18 percent over 1979. [SK151132 Jinan Shandong Provincial Service in Mandarin 2300 GMT 12 Jan 81]

**HEILONGJIANG MUNICIPAL INDUSTRY**--Mudanjiang Municipality, Heilongjiang, increased its 1980 industrial output value and profits by 9.8 and 9.65 percent, respectively, over 1979. In 1980, its investments in light and textile industries were 44 million yuan, 78.9 percent of total industrial investments. The proportion of light industry increased from 38 percent to 43.3 percent in 1980, and the growth of light and textile industries was 15.7 percent higher than that of heavy industry in 1980. [SK191010 Harbin Heilongjiang Provincial Service in Mandarin 2200 GMT 17 Jan 81]

**HEILONGJIANG SECOND LIGHT INDUSTRY**--The second light industrial bureau of Harbin Municipality, Heilongjiang Province, increased its 1980 production by 8.9 percent more than the 1979 figure. The output value of industrial goods serving the people's livelihood increased by 88 million yuan in 1980, 36 percent more than that of 1979. [SK191010 Harbin Heilongjiang Provincial Service in Mandarin 1100 GMT 18 Jan 81]

**HEILONGJIANG MUNICIPAL INDUSTRIAL ENTERPRISES**--The total industrial output value of 33 light and textile industrial enterprises in Qiqihar Municipality, Heilongjiang Province, was 196 million yuan and profits 14 million yuan in 1980, an increase of 45 percent and 570 percent respectively over the 1979 figures. These enterprises also put into production some 35 new varieties and 325 new designs and carried out 162 technical innovations in 1980. [SK221032 Harbin Heilongjiang Provincial Service in Mandarin 1100 GMT 21 Jan 81]

**PRODUCTION RECORDS**--Beijing, 30 Jan (Xinhua)--China registered new records in production of wristwatches, bicycles and sewing machines in 1980. The country produced 22.55 million wristwatches, 13.4 million bicycles and 7.66 sewing machines in 1980, an increase of about 30 percent over 1979. In 1980 nearly 19 million wristwatches, 10.43 million bicycles and more than 5.7 million sewing machines were sold in the country. [Beijing Xinhua Domestic Service in Chinese 1425 GMT 30 Jan 81]

**JIANGSU ELECTRONIC COMPUTERS**--The electronic computer industry has developed rapidly in Jiangsu Province. Jiangsu can now produce medium-sized, small and microcomputer with integrated circuits made in China. Mass production of LSI's will begin soon. The Nanjing Aeronautics Institute and Jiangsu Radio Plant have joined efforts in producing Model-52 microcomputers which can be used for carrying out scientific calculations, data processing and industrial controls. Jiangsu is now stepping up its efforts in producing microcomputers to be used in serving the country's four modernizations program. [Nanjing Jiangsu Provincial Service in Mandarin 1100 GMT 6 Jan 81]

**ZHEJIANG INDUSTRY**--Machine-building enterprises in Zhejiang have made vigorous efforts to turn out light industrial products and other articles for daily use, such as women's bicycles. The light industrial products produced by the machine-building enterprise in 1980 were worth 200 million yuan, accounting for 20 percent of their total output value. [Hangzhou Zhejiang Provincial Service in Mandarin 1100 GMT 14 Jan 81]

**TIANJIN INDUSTRIAL PRODUCTION**--Tianjin, 19 Jan (Xinhua)--The industrial output value of Tianjin exceeded 19,300 million yuan in 1980, 10.8 percent more than 1979, according to the city's statistical department. Tianjin handed over profits of 1,190 million yuan to the state last year, 10.6 percent over the 1979 figure. The revamping of old equipment was largely responsible for the increases. Last year, Tianjin's light industrial output value jumped by 18.8 percent. As a result, its proportion in the city's total industrial output value rose from 49.4 percent in 1979 to 53 percent last year, exceeding that of heavy industry for the first time since 1973. An even bigger increase was recorded in the output of higher-grade consumer goods in keeping with the rising purchasing power. Such goods accounted for 68.1 percent of the city's light industrial products in 1980, as against 64.6 percent in 1979. Tianjin's industry did everything possible to save energy during the year. The energy saved in 1980 amounted to the equivalent of 700,000 tons of standard coal, or a 9.6 percent drop in energy consumption from the 1979 figure. [Text] [Beijing Xinhua in English 0707 GMT 19 Jan 81]

**JIANGSU NEW COMPANY**--Nanjing, 1 Feb (Xinhua)--Approved by the Jiangsu Provincial People's Government, 41 military industrial enterprises and civilian business units in Jiangsu recently set up the Xinshidai (New Era) Company in Nanjing to organize their manufacture and marketing of goods for civilian use. The company markets the shareholding units' products ranging from television sets to clothing. It is the first of its kind in China. [Beijing Xinhua Domestic Service in Chinese 1157 GMT 1 Feb 81]

**GUANGXI ELECTRONICS PRODUCTION**--Guangxi region has greatly developed its local electronics industry. According to statistics, the total production value of the region's local electronics industry in 1980 overfulfilled the year's plans by 42.6 percent. From 1971 to 1980, total annual production value increased by an average rate of 15.8 percent each year. The quality of electronics products has also been greatly improved lately. [Nanning Guangxi Regional Service in Mandarin 1130 GMT 20 Jan 81]

CSO: 4006

## CONSTRUCTION

### SHANDONG URGES CONTROL OF CAPITAL CONSTRUCTION PROJECTS

SK261233 Jinan Shandong Provincial Service in Mandarin 2300 GMT 25 Jan 81

[Station commentary: "Conscientiously Readjust Capital Construction"]

[Excerpts] Since the implementation of the policy on readjusting the national economy, our province has suspended or curbed 553 capital construction projects, amounting to an investment of 1.21 billion yuan. The capital construction front of our province, however, remains overextended. Its scale is too large and the returns on investment are too little. Great problems still remain on the capital construction front. Our inability to reduce the scope of capital construction are due to the following:

1. We have failed to eliminate the erroneous leftist influence and to understand the importance of readjusting the national economy. Over the past years, large scale capital construction projects have been blindly carried out.
2. We have spent too much money on capital construction.
3. Regulations for capital construction have not been strictly observed. Some leading persons have failed to work according to procedures, pay attention to economic results and call for technological evaluation. They have arbitrarily expanded the scope of capital construction front and personally decided on projects without discussing them with the departments concerned. In order to realistically curtail the capital construction front, we must manage it in a unified way. In the future, all capital construction project plans must be submitted to the provincial authorities for examination and approval. [passage omitted]
4. We must strictly enforce capital construction regulations. All capital construction projects must be included in the capital construction plan and funds should be deposited in the construction bank. The financial, banking and examination departments at all levels must supervise this work according to the plans approved by the provincial authorities. The construction departments should not carry out any unauthorized projects designed by specific units on their own. Banks should not issue funds and supply departments should not allocate materials in support of these projects. [passage omitted]

CSO: 4006



## CONSTRUCTION

### NEWSPAPER COMMENTS ON REGULATING CONSTRUCTION SCALE

HK221157 Beijing RENMIN RIBAO in Chinese 15 Jan 81 p 5

[Article by Wang Zhuo [3769 3820]: "A New Research Project--The Theory or Practice of Using National Resources to Determine the Scale of Construction"]

[Text] Editor's note: The theory or practice of using national resources to regulate the scale of construction means that given a fundamental balance in the various sectors of the national economy, we cause the pace of agricultural development to act on the pace of industrial development, cause a unified balance in finances, credit funds and foreign exchange to act on a balance in the total value or amount of distributed national income, and cause the total volume of commodity and material supplies to act on an increase in social purchasing power to achieve a balance in the supply of commodities and materials. This is a new theme that must be seriously studied by us. [End of editor's note]

The theory and practice of national resources regulating the scale of construction advanced by Comrade Chen Yun in 1957 have created a new area of research. This helps our efforts to find out the subtle causes of an imbalance in the national economy in planning our work and to find a way for the coordinated development of the national economy.

The theory of a balanced national economy covers a balance in its various sectors or a comprehensive balance. Our three decades of experience in taking planning as a regulating factor show that a comprehensive balance is an overall balance. It provides basic conditions for maintaining a balance in the various sectors of the national economy. If an overall balance is ignored, a serious imbalance in the various sectors of the national economy will inevitably result. The theory of a balance between the scale of construction and national resources expounded by Comrade Chen Yun means that given a fundamental balance in the various sectors of the national economy, we must achieve an overall or comprehensive balance. This is to say, given a rational production structure (or a balance in the proportional rations between the various sectors of the national economy represented by agriculture, light industry and heavy industry), we must strive for a balance in production, distribution, circulation and consumption in the process of social reproduction. Most important of all, we must achieve a balance between production and consumption (including productive consumption). Such an overall balance calls for not only the achievement of an annual balance but also the prediction of a sustained balance in the coming few years and the implementation of given 5- or 10-year plans for the national economy. The important point is that while summing

up the theory of a balance between construction and national resources, Comrade Chen Yun put forward a way to regulate a balance between national resources and construction. Such a way of regulation covers a strategic way of regulation and an aggressive way of regulation.

The so-called strategic way of regulation means the pace of agricultural development acts on the pace of industrial development. In our country, agricultural development regulates the growth of the means of subsistence, the growth of foreign exchange income, the growth of national resources and the growth of the whole industrial population covering light and heavy industries and the urban population.

The so-called aggressive way of regulation means using a balance in distribution and circulation to regulate a balance in production, distribution, circulation and consumption and chiefly a balance between production and consumption (including productive consumption). In other words, this calls for using a balance between the growth of national income and distribution in the area of distribution and a balance between commodity and material supplies and demand in the areas of circulation to regulate a balance between production and consumption, so as to achieve a balance between construction and national resources.

The chief way of regulating a balance between construction and national resources (financial resources) in the area of redistribution of national income is to strive for a unified balance in estimated national revenue and expenditure, bank loans granted and deposits received, and foreign exchange earnings and spending, to regulate a balance in the total value or volume of distributed national income.

In the initial distribution of national income, the industrial and communications enterprises and capital construction units throughout the country, state farms and the basic accounting units of people's communes in the area of agriculture must seek a balance in receipts and payments on their own. That is to say, these units have no right to issue paper currencies and their financial revenues and expenditures must not slip into the red. Of course, these units are also likely to show a deficit. However, such a deficit will eventually find concentrated expression in receipts and payments at various levels. Therefore, as far as these units are concerned, they must not get involved with a deficit in the initial distribution of national income. However, these units can enter into relations with banks in the role of creditors or debtors. That is to say, some units borrow money from banks and some deposit their money there. Some have credit balances and some debit balances. When the total debit and credit balances of these units are added up, it often happens that debit and credit balances are not the same, that is, debit balances exceed credit balances. Why is it that loans exceed deposits? This is because the banks of a socialist state are committed to providing state enterprises with liquid funds. The enterprises must borrow from the banks the money they need in excess of the fixed liquid state funds put at their disposal. When a bank cannot satisfy such a loan demand with its own funds, it has to draw on fund allocations from the state. Only with credit funds appropriated by the state (including the interest income it derives therefrom) can a state bank maintain a balance in its receipts and payments, as far as credit is concerned. Because state funds must be drawn upon to make up for the gap between the credit granted by a bank and the deposits it receives, organizing banks to achieve a balance in their receipts and payments is an important factor in removing the red ink from the state budget.

On the other hand, a balance between the growth of national income and distribution depends on the way the national financial budget is carried out. A national budget usually ends up with either a surplus or a deficit. A balance between income and revenue with a little surplus is normal and necessary. However, if a deficit appears in the national budget, this shows that there is an imbalance in the area of redistribution of national income and that the total national income distributed and used for the year exceeds the total national income available for distribution and use in the same year. A difference thus results. This difference is not backed up by goods and materials but must rely on paper money as its support. Therefore, a large budget deficit will inevitably cause a rise in commodity prices. To insure a balance in the total value or amount of distributed national income and a balance in the total volume of commodities and materials supplied and needed, we must insist on achieving a balance in the national financial budget. Meanwhile, on the basis of properly arranging for the credit funds needed, we must achieve a unified balance in estimated income and expenses and loans granted and deposits received.

The chief way of regulating a balance between construction and national resources (material resources) in the area of circulation of commodities and materials is to use the total volume of commodity and material supplies to regulate an increase in social purchasing power and, on this basis, strive for a balance between supply and demand of commodities and materials.

Our existing system for commodity circulation is marked by two kinds of commodities and two channels of circulation. One kind of commodity is the means of subsistence. Its channel of circulation is the market. Another is the means of production, which people used to call "materials" to distinguish it from the means of subsistence known as "commodities." The chief channel of circulation for the means of production is planned allocation, with a small part of them directly entering the market. There are two different ways to regulate a balance between supply and demand of the means of subsistence and a balance between supply and demand of the means of production.

How should we regulate a balance between supply and demand of the means of subsistence as far as the total volume is concerned? The method of regulation put forward by Comrade Chen Yun calls for using the total volume of commodity supplies to regulate an increase in social purchasing power and not allowing a large increase in social purchasing power to precede the achievement of a balance between supply and demand of commodities. In the development of the national economy, the people's standard of living should be gradually raised. This is determined by a fundamental socialist economic law and is necessary to maintain political stability and arouse mass enthusiasm. However, in a given year, whether conditions exist for the improvement of the people's living standard and the extent to which it can be raised depend on the amount of consumer goods that can be put on the market that year and the makeup of the consumer goods, such as food, clothes, and articles for daily use.

The current annual increase in our social purchasing power is chiefly due to two main factors; an increase in the total amount of workers' wages and an increase in social purchasing power following the upward adjustment of the prices of rural products. The rate of growth in these two respects must be controlled every year. An increase in social purchasing power attributed to bumper harvests and increased sales of agricultural and sideline products is not to be feared. Increased output



of agricultural and sideline products provides a large supply of raw materials for light and textile industries--materials, which, after being processed, can furnish the market with a large amount of consumer goods. Therefore, we need not control an increase in social purchasing power arising out of increased procurement of agricultural and sideline products.

It may be asked: Why should an increase in social purchasing power be controlled? Does an increase in social purchasing power not mean a broader market for consumer goods-related industries? Is a wider market not helpful in developing light and textile industries? Are we not now discussing the regulation of the market? Is it not a very good thing to let the market mechanism regulate the production of light and textile industries and stimulate the accelerated development of light and textile industries? If a rise in social purchasing power is controlled, will this not in turn hamper the development of light and textile industries?

Those people who ask these questions do not understand that according to the conditions of our country, whether the production of consumer goods can be increased and by how much it can be increased are not determined by how greatly social purchasing power is increased but are chiefly determined by the supply of raw and other materials for the production of consumer goods. An increase in the production of consumer goods-related industries is restricted by the supply of raw and other materials. Raw and other materials for consumer goods-related industries chiefly come from agricultural and sideline products, some heavy industrial products, and some materials imported from abroad. Under existing conditions, there are certain limits to supplies from these three sources.

How should we regulate a balance between supply and demand of the means of production, as far as the total volume is concerned? The demand for the means of production--a demand which carries with it an ability to pay--chiefly comes from capital construction investments. An imbalance in the supply and demand of the means of production is chiefly caused by too sharp an increase in capital construction investments. Therefore, a way to regulate a balance between supply and demand of the means of production is to make the total supply of the means of production regulate the total amount of investment in capital construction. How much is to be invested in capital construction every year must of course be determined by the financial state of the country, or by how much money can be allocated for capital construction investment. However, merely supplying funds will not do. Material supplies must be taken into consideration. If we have money but insufficient material resources, we cannot allocate money for capital construction.

By using the total supply of the means of production to regulate the total amount of investment in capital construction, we can achieve on the whole a balance between supply and demand of materials. However, as far as concrete varieties are concerned, some items in acute shortage are still inadequately supplied. This is liable to cause mutual competition for materials. It often happens that capital construction units obtain raw and other materials intended for production enterprises and commodities intended for the market. To solve the problem of competition for materials to meet the needs of production enterprises and the market, we must have a way of regulating material supplies. This demands that in regard to material supplies, we must first insure satisfying the indispensable needs of the departments that produce daily necessities. Second, we must insure meeting the needs of



these production departments that supply the means of production. After meeting the needs in these fields, we can supply the capital construction units with what is spared. Raw and other materials and equipment for capital construction units must be directed first to the important fields and then to the less important ones.

The theory and practice of using national resources to regulate the scale of construction summed up by Comrade Chen Yun are based on fundamental socialist economic laws and the laws governing social reproduction, and on a basically rational structure of production that covers two main segments. Production, distribution, circulation and consumption that interact on each other are used to achieve an internal balance in the area of distribution and the area of circulation to regulate a balance in production and consumption, to maintain the steady development of the national economy and to avoid an imbalance in the various sectors of the national economy. This is a new theme that must be seriously studied by us.

CSO: 4006

## CONSTRUCTION

### BRIEFS

**YUNNAN CONSTRUCTION MATERIALS**--In 1980, the construction materials system in Yunnan earned a total of 6 million yuan of profits, an increase of 100 percent over 1979. Production of cement increased by 2.1 percent over 1979, while that of red bricks increased by 5.5 percent. From January to September 1980, 51 prefectural and county construction materials enterprises throughout Yunnan earned 5 million yuan in profits. [Kunming Yunnan Provincial Service in Mandarin 1100 GMT 5 Jan 81]

**ZHEJIANG RURAL HOUSING**--Housing projects have mushroomed in Zhejiang's countryside. In 1980 over 35 million square meters of houses were built in Zhejiang rural areas with the state and the province providing builders with 4,700 dun of rolled steel, 13,500 dun of cement and 3,700 cubic meters of lumber. The province has 7.99 million peasant households. [Hangzhou Zhejiang Provincial Service in Mandarin 1100 GMT 11 Jan 81]

**ZHEJIANG HOUSING PROJECTS**--Housing projects with total floor space of 2.28 million square meters were built throughout Zhejiang in 1980, an increase by 24 percent over 1979. Houses built in 1980 could accommodate more than 50,000 families. At present, the authorities in all municipalities and townships in the province are making arrangements to assign the newly built houses to eligible applicants. [Hangzhou Zhejiang Provincial Service in Mandarin 1100 GMT 18 Jan 81]

**JIANGXI HOUSING**--Jiangxi Province built 1.47 million square meters' floor space of residential housing in its urban areas in 1980, a 10.5 percent increase over 1979. [Nanchang Jiangxi Provincial Service in Mandarin 1100 GMT 18 Jan 81]

**JIANGXI COMMUNICATIONS**--In 1980 Jiangxi Province installed in its urban areas some additional switchboards capable of connecting 4,520 telephones, 2,800 of which are automatic. In addition, it also opened 60 new long-distance telephone lines and 26 microwave telephone lines. [Nanchang Jiangxi Provincial Service in Mandarin 1100 GMT 18 Jan 81]

**JILIN MUNICIPAL HOUSING PROJECTS**--Changchun Municipality completed some 1.14 million square meters in housing floor space in 1980, an increase of 58.7 percent over the 1979 figure. The total housing investment increased by 27.8 percent over that of 1979. Residential housing totaled 760,000 square meters in floor space--a 67.8 percent increase over 1979, the highest figure ever achieved since the PRC's founding. About 94.7 percent of the 1980 major construction projects had been completed. Construction on three workshops costing 1 million yuan each was delayed, saving some 16 million yuan in state funds. [Changchun Jilin Provincial Service in Mandarin 1100 GMT 21 Jan 81]

CSO: 4006

## DOMESTIC TRADE

### BRIEFS

**ANHUI SMUGGLING**--The Hefei Municipal Public Security Bureau, Anhui, has strictly enforced regulations against smuggling and transactions of foreign goods on the black market by assigning policemen and "public security activists" to patrol and monitor various terminals and ferry piers. Since last December the bureau has arrested 21 smugglers and smuggled goods dealers and seized 36 smuggled wristwatches and some gold and silver coins. [Hefei Anhui Provincial Service in Mandarin 1100 GMT 26 Jan 81 OW]

**SHANGHAI BLACK MARKET**--Shanghai, 23 Jan (XINHUA)--Recently Shanghai's leading commercial departments as well as industrial and commercial administration departments took specific measures to curb black-market activities involving cigarette sales. Since the fourth quarter of last year, Shanghai's suburbs and places in neighboring provinces have experienced a cigarette shortage. This has prompted some profiteers to engage in black-market activities in Shanghai. In exchange for farm and sideline products or cash, they obtained from Shanghai residents coupons with which to buy cigarettes. The authorities concerned have sent inspectors to check on the cigarette supplies of local shops. Shops found to have helped the profiteers have been closed down for overhaul and their responsible persons have been relieved of their posts or subjected to economic sanctions. [Beijing XINHUA Domestic Service in Chinese 0351 GMT 23 Jan 81 OW]

**YUNNAN PRICE INSPECTION**--According to a YUNNAN RIBAO report, all companies of the provincial commercial systems have taken various measures to launch price inspections to stabilize commodity prices in accordance with the State Council's circular. They have studied the commodity prices before taking measures to rectify them if necessary in accordance with the following stipulations: 1) commodity prices can be raised if the circular on price increases was issued before 1 December; 2) commodity prices cannot be raised until further study if the price increase circular was issued between 1 to 7 December; 3) commodity prices cannot be raised if a similar circular was issued after 8 December; 4) prices of commodities are to remain the same at present even if they have been wrongly fixed. [HK211508 Kunming Yunnan Provincial Service in Mandarin 1100 GMT 20 Jan 81 HK]

CSO: 4006

## FOREIGN TRADE

### WORK SUSPENDED ON TWO PETROCHEMICAL PLANTS

OW301141 Tokyo KYODO in English 1130 GMT 30 Jan 81

[Text] Tokyo Jan 30 KYODO--The Japanese companies have been informed by China of the indefinite suspension of work on two giant petrochemical plants, one in Nanjing [as received] and the other in Shengli, Shandong Province, industry sources said Friday.

The Chinese notification, which reached the companies Thursday night, asked the firms, including C. Itoh and Co. and Toyo Engineering Corp., to stop placing orders for equipment for the plants with their subcontractors.

It also said China hoped to hold talks with the Japanese companies on measures to be taken for them in connection with the suspension.

The Chinese notification came as a great shock to the Japanese companies, because they have already begun manufacturing the plant equipment.

The suspension of the Chinese projects entails losses totaling yen 212 billion (about dollar 1 billion) for the companies involved, the sources said.

The Chinese action, which followed the recent cancellation of the second-phase steel plant construction project at the Baoshan Steel Mill in Shanghai, also shocked the government.

In this conjunction, government sources said, the Ministry of International Trade and Industry has filed a representation with the Chinese Government.

In the representation, filed through the Chinese Embassy in Tokyo, the ministry said unilateral cancellation of plant equipment import contracts would impair future Japanese-Chinese economic relations, according to the sources.

The ministry hopes to have thorough talks on this issue when a delegation of the China National Technical Import Corporation visits Japan next week to explain the Chinese action, they added.

CSO: 4120



## LABOR AND WAGES

### BRIEFS

**ZHEJIANG BUSINESS PERFORMANCE**--The total income of Zhejiang's commune- and brigade-run enterprises in 1980 was 4.5 billion yuan, an increase of 36 percent over that in 1979. Their total profits amounted to 680 million yuan, an increase of 26 percent over that in 1979. In 1980, the total industrial output of five counties in the province topped 200 million yuan each. [Hangzhou Zhejiang Provincial Service in Mandarin 1100 GMT 17 Jan 81]

**ZHEJIANG YOUTH EMPLOYMENT**--Some 227,000 young people were given jobs in Zhejiang during 1980. The original number of people unemployed was over 250,000. Efforts are now being made to assign jobs to the rest of the unemployed. During the past 3 years, the province has found jobs for 800,000 people. [Hangzhou Zhejiang Provincial Service in Mandarin 1100 GMT 17 Jan 81]

**SHANGHAI WORKERS' PAID HOLIDAYS**--Shanghai, 20 Jan (Xinhua)--About 30,000 Shanghai workers and teachers were given paid touring holidays or were sent to quiet scenic spots to recuperate from illness last year, the city's Council of Trade Unions said. The holiday tours generally lasted 1 or 2 weeks while recuperation leave ranged from several months to a year. Some workers have been recuperating in rest homes for the past 2 years. The workers received full wages while on holiday and all expenses, except meals, were carried by the state. Shanghai has more than 80 workers' rest homes with nearly 6,000 beds. They are all situated in scenic spots. [Text] [Beijing Xinhua in English 0744 GMT 20 Jan 81]

CSO: 4020

## TRANSPORTATION

### CHINA'S CAAC STRIVING TO IMPROVE AIRLINE SERVICE

OW151304 Beijing Xinhua in English 1253 GMT 15 Jan 81

[Text] Beijing, January 15 (Xinhua)—China's Civil Aviation Authority said CAAC will strive to stay competitive in prices. The airline does not intend to increase air fares despite the dropping off of international air passenger traffic and rising fuel costs.

Shen Tu, the CAAC director-general, said CAAC is improving its reservations and ticketing system, in preparation for a link up with international computerized reservations services in March.

He made the statements here this afternoon at a press conference in Beijing sponsored by the All-China Journalists Association.

When asked about inefficiency by CAAC staff, the director said there were some problems and CAAC is giving stricter training. It has opened two colleges and six technical schools and sent 160 crew members for training on foreign airlines.

With the recent inauguration of new routes between China and the United States and Britain, CAAC now flies to 17 countries, as well as Hong Kong and Shajah.

Shen Tu said more agreements are expected to be concluded this year. Representatives of airlines from Madagascar, North Yemen and Singapore will be coming to China for talks shortly.

Questioned about China's production of aircraft, Shen Tu said the domestically-produced Yun-7 airliner is now being tried out on domestic routes. Another Chinese airliner, the Yun-10, is being produced on a trial basis. He said CAAC is also considering purchases of foreign aircraft and is studying the options.

Two airports, Hongqiao in Shanghai and Baiyun at Guangzhou (canton), are open to civilian aircraft from Taiwan Province at any time in case of emergency, Shen Tu said.

CSO: 4020

## TRANSPORTATION

### BRIEFS

**SICHUAN SUNKEN SHIP**--The No 4 passenger ship of Pingshan County Shipping Company capsized on 26 August 1980 on the Jinsha River on its way to Yibin. Many people were drowned, and losses totaled 500,000 yuan. Leaders throughout Pingshan County attached great importance to this incident and carried out a profound investigation of the cause of the incident. On 30 December 1980, the Pingshan County People's Court conducted a public trial on this incident. (Liu Guoqing), acting captain of the No 4 passenger ship, was sentenced to 2 year's imprisonment and other people concerned were also sentenced to imprisonment for 1 to 2 years. [HK100726 Chengdu Sichuan Provincial Service in Mandarin 1100 GMT 6 Jan 81]

**ZHEJIANG PASSENGER PIER**--Hangzhou, 20 Jan (Xinhua)--Hangzhou pier, the largest inland waterway passenger pier in Zhejiang Province, was inaugurated in Hangzhou Municipality on 20 January. This pier is the terminal of the Beijing-Hangzhou Grand Canal. With a length of 200 meters, the pier can berth 12 ferries at a time. [Beijing Xinhua Domestic Service in Chinese 1158 GMT 20 Jan 81]

**HEILONGJIANG ROADS**--Heilongjiang Province now has 15,200 km of local roads, of which 10,252 km were under the maintenance of the province. Some 98 percent of the rural communes and 75 percent of the production brigades have highways. In 1980 Heilongjiang Province repaired 702 km of local roads, constructed 739 km of new roads and built 119 bridges. [SK221032 Harbin Heilongjiang Provincial Service in Mandarin 1100 GMT 21 Jan 81]

**SHANXI DOUBLE-TRACK RAILWAY**--Taiyuan, 11 Jan (Xinhua)--A 135-kilometer-long over-loaded railway section is being double-tracked to facilitate the development of China's leading coal-producing province, Shanxi. This section is part of the 488-kilometer-long Southern Tongpu Railway which connects Taiyuan, capital of Shanxi, with the Longhai Railway, a major east-west artery of the country. The project is expected to greatly increase the volume of coal to be shipped out from the province. [Text] [Beijing Xinhua in English 1213 GMT 11 Jan 81]

CSO: 4020

## GENERAL

### 'RENMIN RIBAO' CRITICIZES ADVERTISEMENT FOR EXAGGERATION

OW312308 Beijing Xinhua Domestic Service in Chinese 1417 GMT 31 Jan 81

[Report on 31 January RENMIN RIBAO commentator's article: "Truth is the Life of Advertisement"]

[Text] Beijing, 31 Jan (Xinhua)--The article says: In recent years the various forms of commercial advertisement that have appeared in newspapers, on radio and television broadcasts and in streets in cities and towns have played a positive role in bridging gaps between production and marketing, speeding up the flow of commodities, promoting production and providing guidance to consumers.

While rapid development of the advertising business has reflected a flourishing market, it has also turned up many problems. For instance, some advertisements have given false information and thus directly violated socialist economic principles.

The article cites a number of examples. A certain plant in Jiangsu's Jiangdu County put out an advertisement even before the plant construction had been completed, saying: "Our products perform satisfactorily and are beautifully shaped." But a buyer from a certain unit in Hebei could not even determine the whereabouts of the plant. We should like to ask: How can a plant that has not yet begun production turn out products that perform satisfactorily? A certain plant in Xinxiang, Henan Province, attached a label reading "a major scientific achievement of the provincial scientific and technological conference" to a product on trial production whose quality had not yet been appraised. This is sheer lying. Some advertisements indiscriminately use "renowned the world over," "of outstanding quality," "provide good service" and other such exaggeration. Exaggerating inevitably leads to discredit. Some units improperly use the most prominent space to advertise foreign commodities, and some television and radio stations assign advertisements their best time. These practices are like encouraging a presumptuous guest to usurp the role of the host. Some advertisements take up too much space; some look ugly and even sinister; some are dubbed with strange noises or sounds; and still others take up too much time. They all tend to force their views on others but have only succeeded in arousing mass indignation. We must understand that "truth is the life of advertising." If an enterprise does not prize its reputation but, to meet temporary needs, irresponsibly puts out exaggerating advertisements to deceive others, it is tantamount to drinking poison to quench thirst. Our socialist enterprises must adhere to the principle of "seeking truth from facts" in advertising their products.



The commentator's article points out: We must realize that although advertising plays a positive role, it is not omnipotent. Under socialist conditions, the main effort should be directed at planned readjustment, while the role of advertising is limited and must obey the interests of the whole in our socialist economy. In carrying advertisements, the undertaking units, such as newspapers, broadcasting stations, television stations and advertisement agencies, must pay attention to serving economic readjustment and must exercise sound judgment in advertising. They must strive to produce good advertisements that are in line with state economic policies and are truthful and in good taste. We hope that both professional advertisement workers and advertisement proponents strive to study the theories, techniques and skills of advertising and make their due contributions to raising the quality of advertisements and developing China's socialist advertising business. The industrial and commercial administrative departments are responsible for guiding and supervising advertisement work. They must formulate effective and feasible control measures, cooperate with other departments concerned to work out unified regulations for governing advertising activities, strengthen administrative management and strictly handle all violations of law that use advertisements to deceive the people.

CSO: 4006

## GENERAL

### BRIEFS

**BEIJING CONTRABAND SEIZED**--Beijing, 20 Jan (XINHUA)—Police and customs officials seized 500,000 yuan worth of goods from smugglers and speculators in the capital last year, according to a GUANGMING DAILY report yesterday. The report said the confiscated goods included automobiles, antiques, gold and silver articles, television sets, textiles, wristwatches, calculators and radio-cassette recorders. City authorities have been conducting a campaign against smuggling and speculation for more than a year. Controls had been tightened at railway stations, trading centers and free markets, favorite haunts of speculators and where most trading is done in smuggled goods. Some state-owned and cooperative enterprises were accused of trying to earn extra money by giving speculators certificates and receipts and by offering the use of their bank accounts. In a circular to the city's commercial managers and store clerks, the Beijing Number 1 Commercial Bureau has called for "resolute action" against speculation and says speculators should be severely punished. [Text] [OW210535 Beijing XINHUA in English 0700 GMT 20 Jan 81 OW]

**SHANGHAI RATION COUPONS**--The Public Security Subbureau and the Industrial and Commercial Administrative Bureau of Luwan District, Shanghai Municipality, took joint action on 25 January to wipe out blackmarketing in oil-ration coupons. Thirteen persons engaged in illegal transactions of oil-ration coupons were seized. [Shanghai City Service in Mandarin 1130 GMT 27 Jan 81 OW]

CSO: 4006

END

**END OF**

**FICHE**

**DATE FILMED**

Feb. 23 1981





